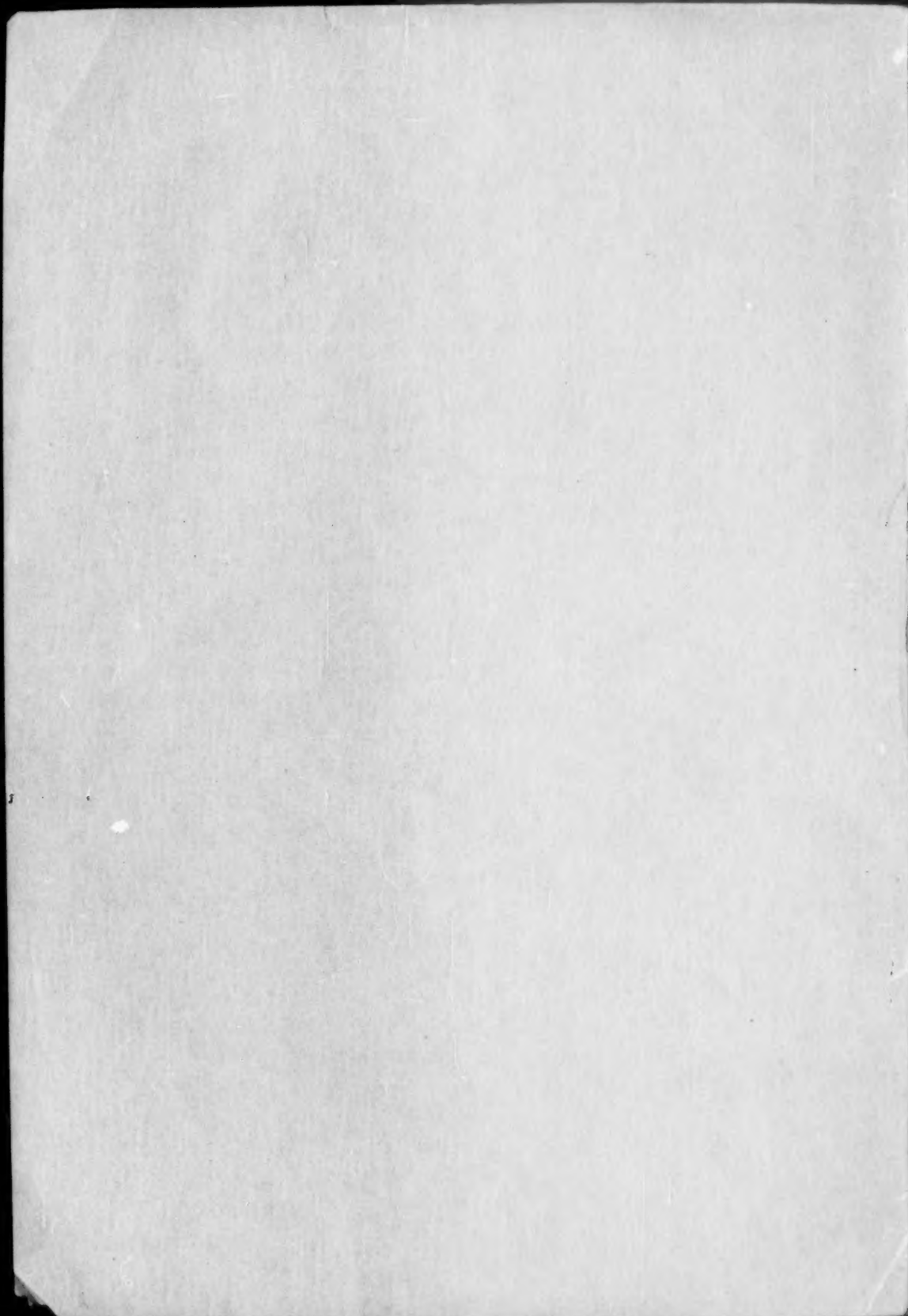


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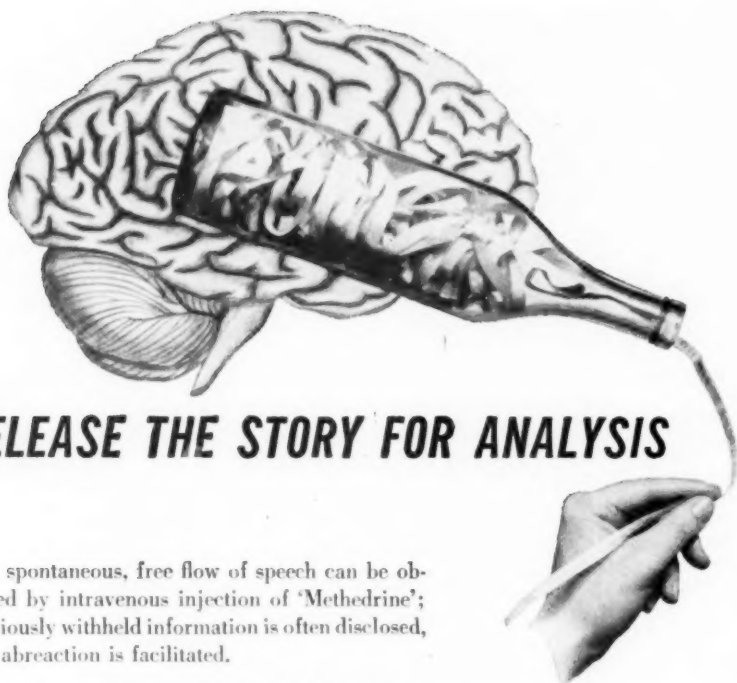
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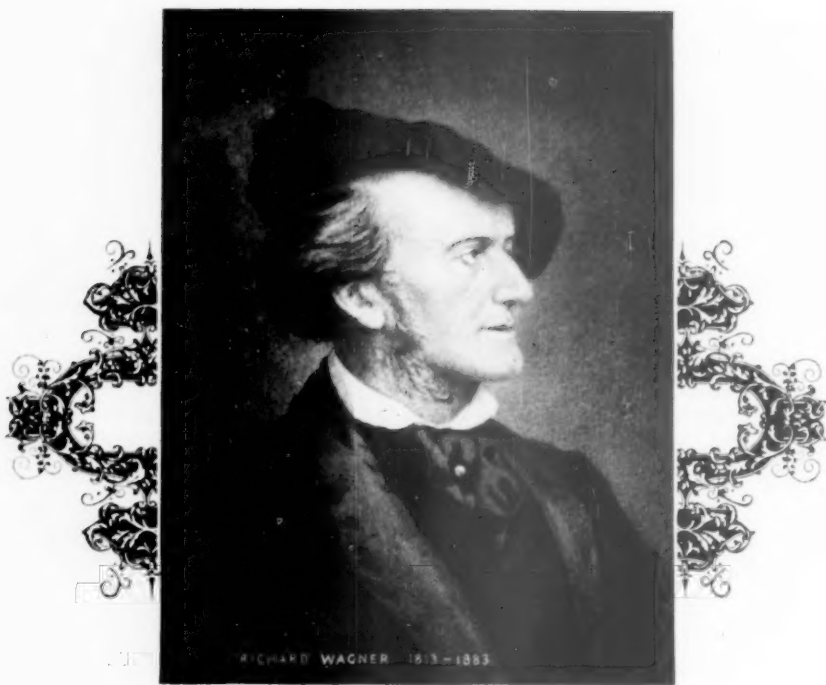
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PRESIDENTIAL ADDRESS

THE INDIVIDUAL PSYCHIATRIST AND SOCIAL PSYCHIATRY¹

JOHN C. WHITEHORN, M. D., BALTIMORE, MD.

The opening session of the annual meeting of The American Psychiatric Association provides the occasion, and the responsibility, for a Presidential Address. Tradition has established no set pattern for this presidential function. No specific business report of the activities of the Association is expected at this time. Our program for the week provides business sessions for such purposes. It has happened, however, as a matter of historical development, that the past few years have been a period of special growth and considerable struggle in this Association, and I wish to comment upon some of these developments and upon the present trends in American psychiatry.

To the student of group dynamics—and every psychiatrist needs to be in some measure a student of group dynamics—the last five years of our association have been a period of absorbing interest.

The central organization of our Association has been very considerably strengthened and I hope will soon be further strengthened by the consolidation of our two principal offices. From the organizational standpoint there is a special need now for another development, which would gain for the Association the benefits of wider participation by the membership in the determination of our Association's attitudes and program. The provision for District Branches offers a sound basis for the representation of constituent regional groups, and I earnestly hope that the current exploration of this possibility will develop a good plan. Much constructive thought has been given to this matter in the Executive Committee and Council, but the problem requires, inherently, much active work at the state level. It is, I think, a wise provision of our By-Laws that the initiative for the formation of a District Branch lies

with the membership residing in a state or group of states.

In view of a great deal of discussion in recent years regarding the best method of organization and operation of our association, and in view of some changes made at the annual meeting last year, and a certain amount of remaining confusion, it has seemed to your officers appropriate to prepare a brief "Manual of Organization and Policies" for the information of the members of this association and the guidance of the officers. The more general material for such a manual has been prepared, and was approved by the Council at its meeting on Saturday. Additional statements dealing with more detailed operations are also being prepared.

Confusion and misunderstanding breed mistrust and antagonism. A clear formulation of our purposes, organization, and mode of operations, in the form of a manual, does not, in itself, provide wisdom or progress, but it provides a common framework of reference for discussions of policies and practices, and thus makes possible better teamwork and better progress. It is my earnest hope that this manual will, in this manner, contribute to better understanding and good will and help us more effectively toward our objectives. The Council has authorized the preparation of sufficient copies of the manual so that every member can have a copy.

In commenting now upon the recent developments in this Association, I shall doubtless show a certain personal bias, because my interest in the Association has been mainly concerned with the contributions that such an Association can make to *scientific advancement in psychiatry*, whereas much of the struggling in recent years appears to have been concerned with the problems of public relations and influence. The scientific purpose of our Association should, I think, be kept as the primary and central concern. Our Constitution sets as our first objective, "(a) to further the study of subjects pertaining to

¹ Read at the 107th annual meeting of The American Psychiatric Association, Cincinnati, Ohio, May 7-11, 1951.

the nature, treatment and prevention of mental disorders." This *primary* purpose of the Association has been implemented largely by the JOURNAL and by the annual meeting, where we gather for the comparison of our experiences and observations.

In a certain sense, the program of each annual meeting may be looked upon as a harvesting of the crop, a presentation of the results of scientific labors that have reached a certain stage of fruition or of progress, as selected by our program committee. In another sense, however, the scientific program is not a mere harvest but a constructive workshop where scientific workers perform one of their most significant labors—the labor of group participation in the progress of thinking. The very act of preparing and presenting a paper is one step in this labor of communication—a preparation for effective and useful consultation with others. To a limited extent, the platform discussions of such presentations form a part of this consultative work shop. In a more effective manner, the after-thoughts, the meetings in small groups at lunch and in the corridors continue the labor of communication. No man lives to himself alone, intellectually and scientifically. All require the interaction with other minds—either actually in person-to-person exchange or in that imaginative meeting of minds that constitutes the preparation of a report, during which one considers the possible reactions, the understandings, and the misunderstandings of others. The program committee struggles with the task of choosing papers and of providing optimal conditions for effective intellectual sharing in this group task at our annual meeting. For this purpose, there are advantages in small groups or sections. Such fragmentation of our annual meeting also provides more places on the program and diminishes somewhat, for the program committee, the heavy responsibility for rejecting papers, because more papers can be scheduled in a highly sectionalized program. There are, however, some areas of common interest to all our members, and there is a need for general scientific sessions, even at the sacrifice of some sectional sessions. Just for the sake of group morale, there is need for all who attend the annual meeting to come together in a united

session devoted to a scientific topic. I wish to express my special appreciation to the program committee this year for arranging two general scientific sessions.

The Association has begun this year another type of activity to foster scientific study—the Regional Research Conference, designed to establish and cultivate communication and mutual stimulation and interaction among the active investigators of psychiatric problems in a geographical region. This Association includes members over a very wide territory. Time and distance hinder the continuity of understanding and the community of interest that may be momentarily established at annual meetings. There are potentialities for initiating and fostering, by regional conferences, a more continuous type of intellectual ferment and interaction than can be done by the annual meeting. The first APA Regional Research Conference was held in Denver in March, 1951. It was accomplished with no financial cost to this Association.

The holding of the Second Mental Hospital Institute in St. Louis last October marks a stage of success in another type of workshop group study, sponsored and managed by the Association. There are many problems involved in the administration of mental hospitals, and there is the ever-present need to adapt administration to the complex needs of a considerable variety of patients for special therapy, decent care, and a socially therapeutic milieu. The institute or workshop type of meeting, with a limited attendance and a large degree of participation by all present, and with much opportunity for informal continuation of discussion, appears particularly well suited to such needs. The APA Mental Hospital Institute is such an enterprise. We have found that it can be made self-supporting financially, but it does not come into being spontaneously. It takes a great deal of hard work and devoted leadership. The Association is making a very real and distinctive contribution to the improvement of hospital psychiatry by its leadership in establishing and managing the Mental Hospital Institutes.

The Mental Hospital Service and the Central Inspection Service are some of the wider activities of this Association, for the im-

provement of mental hospitals. They represent the professional purposes of the Association, as distinguished from its scientific purposes. Such a duality of purpose need not, however, be in conflict.

In the present organization of our Association we have in our standing committees potentialities that are only partially realized. Several of the committees with definite job assignments have done admirably. I feel, however, that I am not alone in my dissatisfaction about our committee work. It is my personal belief that we can accomplish more by a consolidation of committees and a clearer definition of function and by providing more adequate executive and secretarial assistance. It is my hope that the work of the coordinating committees, which have been in existence only this year, will serve to bring about some such improvements. I believe that the coordinating committees are already developing better planning and teamwork among existing committees.

Several of our committees seek to ascertain and to formulate the prevailing professional opinion and attitudes of the Association on matters of great practical interest and concern. When accepted by the Association in a clear and definite manner such committee reports and resolutions serve as policy statements, guiding our officers and employees in their services, to the Association and to others. For example, the Committee on Clinical Psychology has worked long and earnestly, and succeeded in 1949 in achieving a clear and succinct statement, which, when approved by the Council and by the Association, established the Association's attitude in a simple and quotable form:

- (1) The American Psychiatric Association is strongly opposed to independent private practice of psychotherapy by the clinical psychologists; and
- (2) The Association believes that psychotherapy, whenever practiced, should be done in a setting where adequate psychiatric safeguards are provided.

The Committee on Clinical Psychology has also formulated a further clear and succinct statement of principles involved in the psychiatric use of clinical psychologists, which has just been approved by the Council and will be submitted to the Association for ap-

proval at one of the business sessions of this annual meeting.

The Committee on Nomenclature and Statistics has succeeded, after several years of labor, in formulating a revised nomenclature, which represents a compromise, not unanimously approved, but accepted and approved by a majority of the Council in its November meeting. Such a task involved much labor, in studying the reasons for dissatisfaction with the previous official APA system of nomenclature, and also in the systematic sampling of representative opinions regarding changes desired.

Another committee whose work is of great importance to mental hospitals is the Committee on Psychiatric Hospital Standards and Policies, especially in its judgments as to proper ratios of patients to personnel. It has been the general tendency, I believe, to set rather idealized standards, as a goal to aim at. It would enormously increase the force of such recommended standards, in my opinion, if the statement of standards could be accompanied by a brief statement of actual personnel ratios, in the larger private hospitals, as well as in the public hospitals, with data as to the rates of recovery and improvement of patients, under different personnel ratios. Such a task is too onerous for the spare time of a committee, no matter how devoted, but it would be immeasurably more useful than the mere promulgation of ideals.

These samples of constructive committee activity, as they have been accomplished, and as they might be considerably improved, require the assistance of full-time personnel in our established offices. They require, also, fairly extensive sampling of the judgments of the membership of the Association, both in the formative stages and in the next-to-the-last stages of formulation. There would be much advantage, I believe, in a more general utilization of round tables and of sectional sessions at the annual meeting, for ascertaining the thinking of the membership on matters currently under study by certain committees.

Candor requires that I express also in this connection a strong personal dislike for the pontifical type of committee report, in which too much advice and unsupported opinion are presumptuously set forth as the pronounce-

ments of psychiatry. Candor compels me, also, to confess that I understand the manufacture of such committee reports, from the inside, so to speak, for I have, to my shame, when serving as a committee chairman in years long past, perpetrated a few such reports. There is much greater ultimate value in the type of committee report that documents any recommendation or advice by a careful analysis of the evidence. I am proud to be able to say that I have, also, in past years, had a part in the preparation of this more constructive type of committee report. Out of such experience I have been much impressed by the great value, to a hard-working committee, in having some full-time secretarial assistance. As committees shape up their work and develop specific plans, I believe that the Association stands to gain much by an increasing use of its resources to assist in the studious type of committee work. By such means we may establish, in time, a higher level of quality in committee reports, which could conceivably make them the most eagerly read articles in our publications, rather than perfunctory or admonitory rhetorical exercises.

I speak of this matter primarily because of its potential scientific value; but I wish to comment also in passing upon its potential bearing upon our professional objectives, particularly in strengthening our influence with responsible public officers and other leaders in the community. Committee reports of the studious, scientific type give solidity and force to any stand that the Association takes in order to influence opinions and events. Too often we find ourselves caught, by unanticipated developments, in a state of unpreparedness, in which we may feel obliged to resort to the less dignified and less effective methods of political pressure. How much more effective we could be if, by foresighted committee study and formulation, we could establish and increase the reputation of the Association as a source of pertinent knowledge and well-reasoned judgment, to whom public officials and other leaders would turn, spontaneously, for well-digested information and sound professional opinion, buttressed by a careful analysis of the pertinent scientific evidence! We have been moving a little in this direction. Our committees need en-

couragement and assistance in pushing ahead further and more vigorously.

I have been speaking at some length regarding organizational activities of this Association. I have done so because responsible experiences of the last two years have sharpened my attitudes on these matters and I have felt that you who provided me this educational opportunity might wish to hear some of the thoughts shaped by that experience.

The Association activities on which I have chosen to comment have emphasized the group aspects of our work. A proper regard for a balance of emphasis requires, however, a recognition of the basic importance of the individual in psychiatric advancement. Synthesizing concepts are born of an individual's struggle to organize apparently discordant experiences. Psychiatry is in a stage now, as I see it, when new synthesizing concepts are greatly needed. Psychiatry needs basic improvement more than it needs selling, and for this purpose it is necessary that individual investigators have continuous encouragement and support.

The present condition of psychiatric science and practice in America is in certain important respects significantly different than in most countries. I shall not say presumptuously that psychiatry is more advanced in America than elsewhere, but that it is different. Much of this difference has come about, as I see it, because a number of American psychiatrists have been intensively preoccupied with the social implications of psychiatry.

One aspect of this American interest in social implications has been expressed in the efforts to evaluate the social consequences and the social costs of mental and emotional disorders. Another aspect has been the development of team-work in dealing with social and economic factors. Still another aspect of this social interest has been expressed in the zeal to project certain psychiatric theories onto a broad range of social troubles. This zeal to project psychiatry onto social problems has sometimes outrun good judgment. It is as if promissory notes had been circulated, in the name of psychiatry, beyond our present ability to make good on them. Discounting such excesses of missionary zeal, it appears to me, however, that

there is going on in American psychiatry a scientifically sound development of social psychodynamics. We have gained a partial grasp of the interpersonal dynamics and the intimate social meanings of personality disorders, and we have been learning to use with some success our limited understanding of these social implications for the care and treatment of patients.

It has been remarked that, with all the energy and resources put into psychiatry in America—small for the task in hand, but large in comparison with some parts of the world—most of our so-called "specific" psychiatric methods of treatment have been introduced from abroad, and carry European names—Wagner-Jauregg, Freud, Sakel, Meduna, Moniz, Cerletti and Bini, to mention only a few. This comparison may well stir us to some thoughtful reflection and perhaps to greater practical encouragement and support of individual investigative careers.

The comparison is not, however, so one-sided as might be indicated by a list of names for specific therapies. Two *general* psychiatric methods—barbiturate interviewing and group psychotherapy—have had an American origin, at least a special American development. These contributions and the distinctively American development as a whole have been along social and interpersonal lines. The minds of many workers have converged upon the problems of the patient's social functioning, and the therapeutic methods evolved have been aimed at improving the patient's pattern of interpersonal emotional reaction. Such viewpoints and methods do not readily focus upon the names of individual contributors.

The Meyerian contribution to the shaping of American psychiatry was characteristically toward the development of a broadly conceived psychobiological viewpoint, and the genetic-dynamic study of the person, developing in his specific social milieu. The general psychobiological orientation has favored, in some respects, the Freudian influence on American psychiatry, which has been very great in recent years. It has been difficult for many European psychiatrists to understand the American situation. It looks to some of them as if the psychoanalytic movement had captured American psychiatry. It

is true, I believe, that a considerable majority of American psychiatrists have come to appreciate and to acknowledge the great value of certain Freudian concepts and methods, which have broadened and deepened the study of many psychiatric problems. In this sense, there has been an assimilation of much of psychoanalysis into general psychiatry. In America the psychoanalytic institutes and societies have adhered, wisely, to the requirement of medical qualifications and the need for a period of broader psychiatric training and experience, and the adherence to these principles has aided psychoanalysis, in America, to become recognized as a significant part of psychiatry and of medicine.

The psychoanalytic workers have made considerable contributions to the understanding of the intimately social implications of neurotic and psychotic disorders. These contributions have depended principally, as I see it, upon careful clinical studies of the emotional implications of personal relationships and interpersonal attitudes. It has been heartening to me to observe the increasing tendency in psychoanalytic writing to report observations directly in terms of attitudes and conflicts of attitudes in personal relationships. By this more direct, empirical reporting, freed of excess ideological baggage, intellectual freedom may be gained for the necessary revision of the traditional and outmoded Freudian ideologies and presumed etiologies. The steps taken by Alexander and French(1) in shaping psychoanalytic therapy, strategically, around current interpersonal issues and attitudes in the patient's life situation are steps that will, I hope, lead others to a greater freedom of thinking about the psychotherapeutic process, and to more adequate concepts of the interpersonal interactions involved.

Harry Stack Sullivan(2) has been one of the most significant American contributors to the appreciation and formulation of social implications in psychiatry. Indeed, his special term "interpersonal relations" has become almost a proprietary label.

Norman Cameron(3) has presented another and different conceptual system, formulated in terms of social role taking, to depict the intimately interpersonal dynamics of personality disorders.

These authors, quite different in their theoretical preconceptions, serve to illustrate well the convergence of American psychiatric thinking upon the social nature of man.

In my own simple and untutored way I got caught up in this same problem a couple of decades ago, when, as an investigator of biochemical and physiological problems, I sought appropriate dynamic behavioral correlations, and felt obliged to take into account the varying patterns of emotional evaluations discernible in different patients (4, 5), and I have since been much preoccupied with the participant-observer methods for studying the recovery process (6) and the emotional significance of interviews (7). Testing one's inferences and hypotheses, in a practical way, by attempts at psychotherapeutic intervention and participation (8, 9), one encounters and explores those interesting limitations of patients' social-emotional development that we are accustomed to call immaturity (10).

As we observe our fellowmen, in general, we find them engaged in an expanding search for emotional values and in evolving new forms of satisfying experiences, building up thereby the systems of assumptions and attitudes expressed in the way they comprehend new situations and react to them. A stimulating presentation of this problem, from the viewpoint of an experimental social psychologist, has recently been given by Cantril (11).

In our professional work, as psychiatrists, we have come to focus special attention upon the importance of *shared* values and the *communicability* of value judgment, as the basis of the healthy and enthusiastic life of man, as an inherently social being. Professionally, and scientifically, many American psychiatrists are earnestly devoting themselves to the study of this kind of social physiology and pathology. This constitutes,

as I see it, one of the outstanding special features of American psychiatry. We should come thereby to a better understanding of the *factors that hinder*, and the *factors that promote*, the *sharing of emotional values*. Such progress would enable us, I hope, to pull together—more coherently, and with greater clinical pertinence—much knowledge now scattered and unrelated regarding constitutional and genetic determinants and physiological mechanisms concerned in personality functioning.

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JOHN C. WHITEHORN, M. D.

PRESIDENT, 1950-1951

A BIOGRAPHICAL SKETCH

HENRY W. BROSIN, M. D., PITTSBURGH, PA.

The 77th President of the Association, John Clare Whitehorn, is an exemplary leader. In his two successful careers as a biochemist and psychiatrist, his relentless search for sound evidence, his refusal to accept the formulations of others when these seem poorly verified, and his insistence upon dealing directly with a living patient have made him a significant contributor and critic. His careful analysis of obscure but significant psychological data in attempts to make such data more intelligible and verifiable without becoming a victim of individualistic intuition or oversimplified quantification is one of his many strengths that will become more highly appreciated as our experimentation grows. "Prove all things, hold fast to that which is good" might be his motto. His insight that the relatively static biochemical methods of his time, no matter how brilliant, were unequal to the profound complexities of a sick patient, brought him to the full-time study of a whole human being, a step that required daring and imagination, and that highlights one of the central scientific dilemmas of our time.

Born on December 6, 1894, in Spencer, Nebraska, to Geneo W. and Laura E. (Smith) Whitehorn, he spent his early years on a frontier homestead, attending the one-room sod schoolhouse on the prairie (District 14, Boyd County, Nebraska). In his late teens he conducted a Sunday School in the local Congregational church and served as acting scoutmaster of the first Boy Scout troop established in that region. He also worked as a printer in the local newspaper office, a trade that enabled him to work his way through Doane College at Crete, Nebraska. The A. B. degree was awarded to him in 1916. He was also honored in 1947 with the L. H. D. degree. He then taught sciences in the high school at Weeping Water, Nebraska, and coached the football team. This year (1917) saw the publication of his first article, a baccalaureate thesis

based on the review of the evidence for the electronic nature of matter, which was republished by request in the *Scientific American*. He entered Harvard Medical School that fall, receiving the M. D. degree, cum laude, in 1921. His successful investigations as a medical student, including the development of a method for the determination of chlorides in blood or plasma, gained Otto Folin's favorable attention, and led to his working after graduation in Folin's old biochemical laboratory at McLean Hospital. The "Whitehorn method" listed in medical dictionaries refers to the blood chloride method published in 1921.¹

Whitehorn's physiological and biochemical studies, focused upon the physiology of emotional reactions, were characterized by the scrupulous critical study of methodology. His method for the chemical estimation of epinephrine in blood, which was patiently developed to a sensitivity of approximately one part in 250,000,000, did not prove to be sufficiently sensitive for the clinical differentiation of the emotional reactions of patients. This epinephrine method was later modified and improved by Bloor and by Shaw.

Another of his methodological papers on "Permutit" as a reagent for amines, published in 1923,² has been the basis or the stimulus for many contributions by others to the development of chromatographic methods and their use in biochemistry. A recent review by Applezweig emphasizes the value of Whitehorn's fundamental studies in this field. Many methodological achievements have been based on Whitehorn's fundamental study of base-exchange. The following few examples may serve to indicate briefly the range and significance of these applications: Cerecedo and Hennessey's crystallization of

¹ Simplified method for the determination of chlorides in blood or plasma. *J. Biol. Chem.*, **45**: 449, Feb. 1921.

² "Permutit" as a reagent for amines. *J. Biol. Chem.*, **56**: 751, July 1923.

vitamin B₁; Swingle and Pfiffner's purification of a useful cortical adrenal extract; Potts and Gallagher's separation of the oxytocic and the pressor principles of pituitary extract; Oberst's method for the determination of morphine in urine; and Doisy's preparation of vitamin K. Dr. Whitehorn has commented that he has been glad, as a contributor to chemistry, to see that his name and influence continue to circulate in the footnotes of scientific journals and books.

The study of language was a hobby of Dr. Whitehorn's during his laboratory years. It was chosen for study as a quantifiable form of social behavior. He is credited with the discovery of the Whitehorn phenomenon—the observation that in intimate personal letters the high-frequency words are much less frequent than in communications addressed to a larger group. He also developed a form of graph, charting the normal logarithmic relationship between the frequency and rank-order of words, and used this, with George Kingley Zipf, in a study that served to exhibit mathematically the autistic bias of schizophrenic writing.³

Dr. Whitehorn's investigations of emotional functioning were not, however, limited to the chemical and physiological laboratories, or to ingenious formal studies of speech-behavior, but included a considerable amount of personal relationship with his patient-subjects and a keen interest in the personal meaning of the experiences of the patients. His contribution to the symposium on personality functioning at the Washington, 1935, meeting of the A.P.A. gave an illuminating review of his way of viewing and studying habits, emotional attitudes, sentiments, and self-dramatizing patterns as indices of personality. At the Association for Research in Nervous and Mental Disease meeting of 1938, devoted to the topic "The Interrelationship of Mind and Body," he presented possibly his most important paper, a brief and stimulating discussion of the normal function of emotion.⁴ His terse delineation therein of the "acute emotional experience," and its biological significance, has been

quoted by Liddell as the basis for a necessary fundamental re-orientation to the study of conditioned reflexes. An earlier paper in 1932 on emotion and instinct had indicated his dissatisfaction with current clichés, and the direction of his thinking, and he had been encouraged by the enthusiasm of the Harvard biologist W. M. Wheeler, concerning this line of thought.⁵

The "studies" of patients' emotional functioning, as carried out by Dr. Whitehorn, showed recovery in an impressive proportion of those patients, and thus psychotherapy came to be a field of major interest. Particular attention was focused upon the nature of the emotional experiences that appeared to constitute the first steps toward improved interpersonal relations with some one and then toward general improvement. This time-consuming activity tended to subordinate the laboratory tasks. Doctors and their wives were particularly eager to be his patients. At a time when he was still primarily Director of Laboratories, and worked in an office-library-laboratory combination that contained in one corner a polarimeter, in another a chemical balance, and around the walls bound volumes of the biochemical, physiological, and chemical journals, Dr. Whitehorn recalls that his appointment pad during one week listed psychotherapeutic interviews with 6 physicians and 6 wives of physicians.

Following psychiatric work at the Massachusetts General Hospital and the Harvard Medical School from 1935-1938, Dr. Whitehorn accepted, in 1938, the appointment of professor of psychiatry in the medical faculty at Washington University in St. Louis, and turned his major attention to the teaching of psychiatry. He has continued at Johns Hopkins University since 1941, when he was called to the chair previously occupied by Dr. Adolf Meyer. Formulating clearly the dual role of psychiatry in the medical school as a specialty and also as a basic medical science, he set himself the difficult task of organizing the teaching of interviewing as the basic psychiatric skill. In the "Guide to Interviewing and Clinical Personality Study" he has opened for many young physicians and medical students an illuminating concep-

³ Schizophrenic language (with G. K. Zipf). *Arch. Neurol. & Psychiat.*, 49: 831, 1943.

⁴ Physiological changes in emotional states. *Assn. Res. Nerv. & Ment. Dis.*, 19: 256, 1939.

⁵ Concerning emotion as impulsion and instinct as orientation. *Am. J. Psychiat.*, 88: 1093, 1932.

tion of the role of the physician and provided a useful combination of practical guidance and liberating insight.⁶

His psychotherapeutic activities have continued to be prodigious in spite of his many other duties. A few carefully wrought articles chronicle his basic dedication to the understanding and treatment of psychological disorders by psychological means.⁷⁻¹⁰

Recognizing the obligation and opportunity to participate in the work of a professional organization, he has served the A.P.A. in both small and large roles for two decades. In 1931 he was appointed chairman of the A.P.A. Committee on Research, and in 1932 he became the first representative of the A.P.A. in the Division of Medical Sciences of the National Research Council. He has served these organizations, in one way or another, practically continuously ever since then. There have been many other demands for his service on committees, commissions, editorial boards, and advisory boards that have enabled him to have a far-reaching influence on all phases of psychiatric activity.

Despite his retiring disposition, studious habits, and soft-spoken manner, Dr. Whitehorn has played a vigorous role in several of the recent critical events affecting American psychiatry, notably in regard to the American Board of Psychiatry and Neurology. He was named to the Board in 1943 and at the critical time in 1945 and 1946 when strong dissatisfaction with the Board was expressed in the A.P.A., Dr. Whitehorn took the lead in the somewhat unpleasant and difficult task

of remodeling the Board's policies and practices. He served as President of the Board for three terms, in 1946, 1948, and 1949, and did much to develop and maintain good working relations within the Board and confidence in its fairness and judgment.

At a critical point in 1946 in the history of the organization now known as the American Psychosomatic Society, Dr. Whitehorn refused the office of president, protesting against what he considered its excessively propagandistic policies, and urging the more conservative pattern of a scientific society.

Dr. Whitehorn was chosen President-elect of the A.P.A. at a time of considerable tension and confusion in the organization, when his steadiness and clear thinking have been especially needed and appreciated.

Respected as a distinguished investigator and teacher, he helped his colleagues maintain high ideals and judicial attitudes by his strong example. It is an enlightening experience to discuss propositions with him whether they be emotion-laden resolutions, committee reports, or psychiatric abstractions. His methodical dissection of the problem in hand, with graphic exposure of the essential items of information needing repeated examination in order to reach a sound synthesis, gives one a renewed respect for a trained intellect. This power, combined with a deep sympathy for people and his remarkable inner strength, makes him easily recognizable by those in need as one who truly understands and will help. The number and diversity of such people and problems is impressive, so that it is fitting that he receive public honors for his devotion to helping others.

In 1921, Dr. Whitehorn married Jeannette Miller. They had three children. Richard M. is an electronics engineer in Towson, Md. Alfred J. was killed in action in Germany in Nov. 1944. Joanne (Mrs. S. T. Boggs) is a graduate student of social anthropology at Washington University in St. Louis. Mrs. Whitehorn has achieved distinction in recent years as a medical illustrator.

⁶ Guide to interviewing and clinical personality study. *Arch. Neurol. & Psychiat.*, 52: 197, 1944.

⁷ Psychotherapy. (In Barr, D. P., ed. *Modern Medical Method in General Practise*. Baltimore, Williams & Wilkins, 1940, v. 1, p. 3.)

⁸ Psychotherapy. (In Harris, N. G., ed. *Modern Trends in Psychological Medicine*. N. Y., Hoeber, 1949, p. 219.)

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A PROGRESS STUDY OF LOBOTOMIZED AND CONTROL PATIENTS¹

SAMUEL FRIEDMAN, M.D., BURNES E. MOORE, M.D.,
CONRAD O. RANGER, M.D., AND CHARLES RUSSMAN, M.D.

In the past four years since the inauguration of the program of the Connecticut Co-operative Lobotomy Study, over 700 patients in Connecticut have undergone frontal lobotomy. The Lobotomy Committee has reported previously the early progress of some of these cases(1, 2). The present report describes the status of 254 patients at the end of the second postoperative year and compares the progress of these individuals with that of 100 control cases observed for a similar period of time.

THE LOBOTOMIZED GROUP

The methodology of this cooperative study has been described previously(1) and need not be repeated here in detail. Suffice it to state that for each patient a protocol is prepared that includes all necessary clinical data. The symptomatology of each subject, as indicated by 26 well-crystallized features, is recorded prior to the operation and 3 months, 6 months, 1 year, 2 years, and 5 years thereafter. In addition an appraisal of the global improvement, work ability, environmental adjustment, and other pertinent features is made at each of the temporal levels indicated above. The following 5 categories utilized in recording the degree of total alteration in the condition of patients have been defined previously(1) for this

¹ Read at the 106th annual meeting of The American Psychiatric Association, Detroit, Mich., May 1-5, 1950.

From the Connecticut State Hospital, Middletown; the Fairfield State Hospital, Newtown; the Norwich State Hospital, Norwich; and the Department of Psychiatry and Mental Hygiene, and the Psychiatric Clinic, Yale University School of Medicine, New Haven, Conn.

This paper is a report of the Connecticut Lobotomy Study, a cooperative project of the above institutions. The work was supported in part by the Joint Committee of State Mental Hospitals of the State of Connecticut. The operations were performed by Dr. Bernard S. Brody and Dr. William German, of New Haven, and by Dr. William B. Scoville and Dr. Benjamin Whitcomb, of Hartford.

study: recovered or symptom-free, markedly improved, moderately improved, slightly improved, unimproved or worse. Evaluation of the level of improvement is made as objectively and impartially as possible and in accordance with the consensus of several observers, including physicians, nurses, and other personnel in immediate contact with the patients. The data are coded and punched on IBM cards, a procedure that facilitates various correlative analyses.

The present report includes 254 patients whose status at the 2-year postoperative level has been evaluated in the manner indicated. The statistical data for the group are indicated in detail in Table 2, which is presented later in conjunction with comparative data for the controls. In brief summary it may be stated that the group was composed essentially of individuals suffering from chronic mental illness with apparently unfavorable or hopeless prognosis. Cases of dementia praecox comprised 81.5% of the group; 73% had been mentally ill longer than 5 years; 76% had been hospitalized for at least 2 years prior to operation. In general, these patients constituted marked problems in management because of aggressive, combative, and destructive behavior; thus 54% were in restraint or seclusion for a significant part of the day, or were confined to a disturbed ward, prior to lobotomy. Approximately 69% had previously received some form of somatic therapy, usually electric shock therapy, without significant long-term improvement. Others had not received shock therapy or insulin coma because their mental illness and hospitalization had long antedated the use of these procedures, and they were considered hopeless subjects for such therapy.

Clinical results at the 2-year postoperative level are summarized in Table 1. In this and previous reports patients exhibiting moderate improvement, marked improvement, and symptom-free status have been considered together as "significantly improved." Of

is directed to the difference between the percentage of significant improvement exhibited by simple and hebephrenic subgroups and that demonstrated by other types of schizophrenia. This comparison is even more striking at the level of markedly improved rating or better. Thus, only 11 of 77 simple and hebephrenic schizophrenics, or 14.3%, exhibited this degree of improvement as contrasted to 31.6% for all other subgroups.

This feature has been emphasized previously by one of us (3) and has also been recognized by other observers (4). Similar difference in reaction is observed in response to the shock therapies. This observation would appear to imply that patients with prominent constitutional factors, suffering from "nuclear" or "process" dementia praecox, are more resistant to all currently known methods of treatment.

At the 2-year level 37.6% of our 244 living patients had been released from the hospital by discharge or on extended visit; some 60% of this discharged group did not require any significant degree of supervision. The environmental adjustment of the entire group, together with comparative data at other follow-up periods, is presented in Fig. 3. It is evident that, after a preliminary period of 3 or more months necessary for optimal improvement, the percentage of discharged patients remains relatively stable. The marked diminution in the percentage of patients who required confinement to a disturbed ward is obvious.

Analysis of the diagnostic classification of the discharged patients (Fig. 2B) again emphasizes the relatively unfavorable prognostic features of simple and hebephrenic schizophrenia. Only 20.8% of these types were able to leave the hospital as compared with 43.3% of other subgroups.

At the 2-year level 54% of our patients were able to perform useful work—22% on a full-time basis and 32% at a part-time level. This includes, of course, work that patients were able to perform in the hospital. Unfortunately, we do not have available at this time data concerning the actual number of patients who are self-supporting.

Prior to lobotomy only 8% of the group were able to work on a part-time basis in the hospital.

The effect of lobotomy on individual symptoms has been studied previously by this group (1, 2) and by other investigators (5).

ENVIRONMENTAL ADJUSTMENT OF POSTLOBOTOMY PATIENTS AT VARIOUS TEMPORAL LEVELS

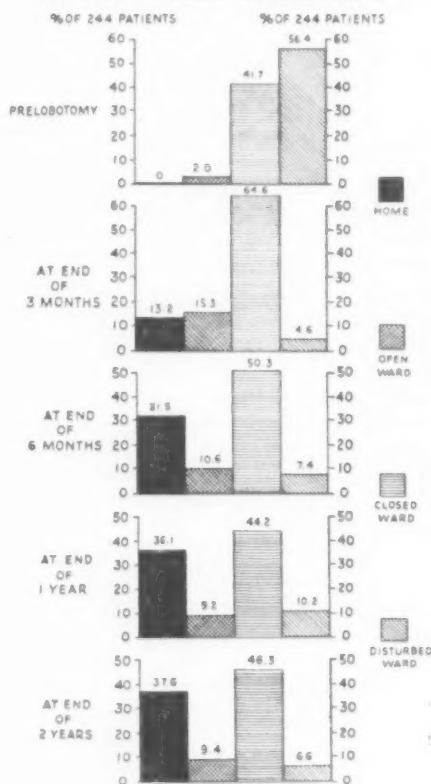


FIG. 3.

It has been emphasized before, at least with respect to the psychoses, that symptoms related to tension and depressive states and hyperkinetic behavioristic features are most amenable to psychosurgery, whereas features such as lack of interest, under-activity, inappropriate affect, and withdrawal are most resistant. The present investigation lends

further support to this observation. Figure 4 indicates the incidence of symptoms in our patients arranged in descending order of disappearance at the 2-year postoperative level. One notes that the following symptoms disappeared in at least 75% of instances: suicidal attempts, food refusal, depression, anxiety, hypochondriasis, combativeness, destructiveness, impulsiveness, and overactivity. The first several of these symptoms are obviously related chiefly to depressive states, whereas the latter symptoms are the hyperkinetic,

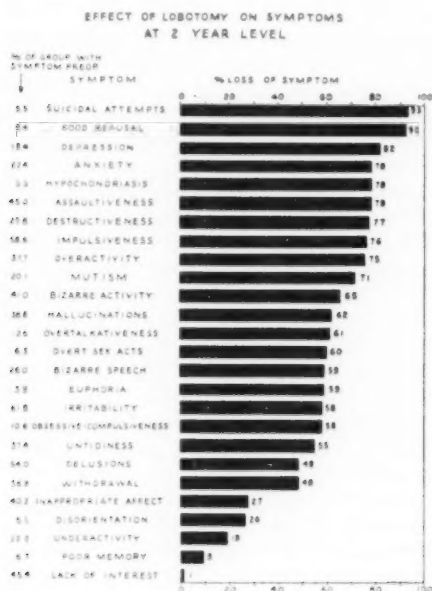


FIG. 4.

emotionally aggressive features (found chiefly in our schizophrenic group) that, as we have indicated, are most responsive to lobotomy. Conversely, lack of interest, underactivity, and inappropriate affect exhibit the least numerical change. No doubt this is due in some measure to the new development of such symptoms in some patients postoperatively; however, this is only a partial explanation of this feature and there still remains the observation that symptoms such as lack of interest, underactivity, and inappropriate affect disappear less frequently following lobotomy than the others studied.

The influence of duration of illness on lobotomy results has been described previously. It seems generally agreed that the temporal factor is less significant in psychosurgery than in other somatic therapies such as shock treatment. Present results (Fig. 5) support our previous opinion(2) that, although there is some decline in the efficacy of lobotomy with increasing duration of ill-

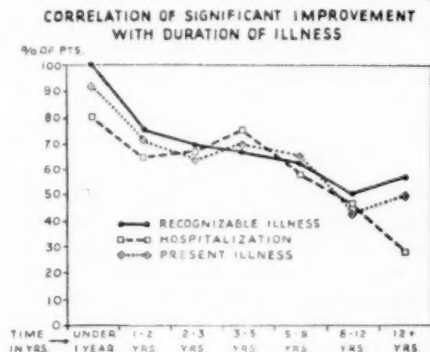


FIG. 5A.

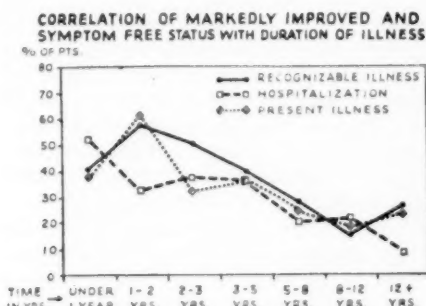


FIG. 5B.

ness, this effect is relatively slight until the 5 to 8-year level has been reached.

There has been ample discussion in previous literature concerning the complications of psychosurgery. Suffice it to state that convulsive seizures continue to be the most frequent significant complication. By the end of 2 years postoperatively 12.3% of our operative group had experienced seizures. This may be compared with an incidence of 7.8% at 6 months and 9.8% at 12 months. It is evident that this complication may not

make its appearance until a year or more after operation. As noted previously, this complication is not a burdensome one; the seizures are readily controlled, as a rule, by anticonvulsant therapy and the great majority of patients with this complication do not experience more than one or two convulsive episodes.

There were 10 deaths in our group during the 2-year period. Of these, 8 were regarded as attributable to the operation—an incidence of 3.1%. It might be pertinent to report that our operative mortality at present in a total group of over 700 patients is 2.4%.

RESULTS IN CONTROL GROUP

The problem of controls in this study, as in all investigations of therapeutic methods, is a vital one. In practically all previous studies the stationary or regressive course of the patients prior to operation has been regarded as the control factor in the investigation. Most reports have indicated implicitly or specifically that only those patients were selected for operation who were chronically ill, who had failed to respond to other methods of therapy, and whose prognosis appeared very unfavorable. It is to be inferred that the future outlook of these patients without operative intervention would have been essentially hopeless. However, in the Greystone Park-Columbia Associates project on topectomy (6) satisfactory controls were maintained by subjecting a group of patients to the same regimen as the operative group, except for the actual surgical procedure on the brain. It was reported that at the 1-year postoperative level 3 of 24 control patients were released from the hospital, as compared to 9 of 24 in the operative group. The marked difference in results is obvious; nevertheless the mere fact that some 12.5% of the, albeit small, control group improved sufficiently to merit their release from the hospital would tend to indicate that their prognosis was innately somewhat better than may have been apparent initially.

Some critical reviews (7) have implied that the somatic and surgical therapies are effective merely in those cases with innately good prognosis and that the results with spontaneous improvement are, in final analysis, as

satisfactory as those obtained with such specific therapies. A recent study by Worthing and associates (8) constitutes an important contribution to clarification of this problem. It was pointed out that in nonlobotomized, control cases of "functional" psychoses the rate of discharge from the hospital decreases markedly after the first year or two, and becomes practically negligible after 4 or 5 years of hospitalization. In control patients hospitalized longer than 1 to 2 years the incidence of improvement and discharge from the hospital falls far below that observed in lobotomized patients. Similarly, of a group of 100 patients who had been treated by shock therapy without immediate benefit, only 13 were able to leave the hospital finally and 11 of these were released within a period of 2 years. In other words, of a group of 89 patients who remained in the hospital longer than 2 years, only 2 or 2.2% were ultimately released. Thus the conclusion appears inevitable that, whether treated by nonspecific methods or by shock therapies, those patients who have satisfactory prognostic features, and who are able to leave the hospital, will do so before the lapse of 1 to 2 years. The rate of discharge thereafter is extremely small. This observation lends added significance to the discharge rate that is commonly observed in postlobotomy patients.

However, one may still offer certain objections to the use of these nonspecific groups of hospital patients as controls in lobotomy studies. Similarly, if controls are selected from patients who are matched as closely as possible with the operative group from the standpoint of such features as age, diagnostic classification, duration of illness and hospitalization, symptomatology, etc., objection might still be raised that, since these control patients were not selected for lobotomy, the implication exists that they differed from the operative group in certain prognostic criteria that prevented the clinician from regarding them as favorable subjects for any sort of therapy—even psychosurgery. Accordingly, from many standpoints it appears that the most satisfactory controls would be patients who had been selected by the clinical staff for lobotomy but on whom the operation could not be performed because of inability

to obtain permission from the family. Under such circumstances the basic material in both operative and control groups may be regarded as similar according to current clinical prognostic features. We feel that other objections, for example, that the operative group is differentiated by subjection to special care and attention, increased occupational therapy and recreational activities, or other adjuncts, have very limited validity inasmuch as postlobotomy patients usually exhibit marked improvement before these adjunct methods are employed. Furthermore, these methods had already been employed in both groups without success. Therefore, it may be concluded that the influence of these minor adjuncts can be disregarded.

The present portion of our study includes 254 lobotomized patients and 100 controls, for whom operative permission was refused, who were observed during a 2-year period. As a preliminary, it is pertinent to inquire whether these two groups, both of whom were selected for lobotomy operation in accordance with current clinical criteria, are matched closely with respect to certain clinical factors that are relevant to the situation. Comparisons of the 2 groups are summarized in Table 2.

It is evident that in general the 2 groups are closely matched. A few differences and other features are worthy of note. The sex distribution reveals a heavier weighting with females in the control group. The explanation is not entirely clear. However, the prognostic effect of sex with respect to mental illness is slight; accordingly, it appears that this difference is of little consequence. The diagnostic grouping is very similar in the 2 groups. A more detailed analysis of the schizophrenic subgroups reveals that simple and hebephrenic types comprised 37% of the total schizophrenic group in the lobotomy patients; the corresponding figure in the controls was 32%. Thus the very slight difference in this area was in favor of the controls. Statistics for total duration of mental illness revealed a somewhat larger proportion of patients with illness over 12 years in the control group. This is also observed in regard to duration of hospitalization. With respect to the latter it may be indicated that 76% of the lobotomy group, as compared with 88% of the control group, had been hospitalized

TABLE 2
STATISTICAL ANALYSIS OF LOBOTOMIZED AND
CONTROL PATIENTS AT ONSET OF
2-YEAR OBSERVATION PERIOD

	Operative group (254 patients) % of total	Control group (100 patients) % of total
1. Sex		
Female	59	80
Male	41	20
2. Age		
Below 30	28	15
30-50	59	55
Over 50	13	30
3. Diagnosis		
Dementia præcox	81	78
Affective disorders	11	9
Others	8	13
4. Duration of illness		
Under 1 year	3	1
1-2 years	5	4
2-3 years	7	5
3-5 years	13	13
5-8 years	26	16
8-12 years	21	22
Over 12 years	25	39
5. Duration of hospitalization		
Under 1 year	11	6
1-2 years	13	6
2-3 years	12	9
3-5 years	17	16
5-8 years	23	14
8-12 years	13	20
Over 12 years	11	28
6. Hospital environment		
Disturbed ward	56	59
Closed ward	42	41
Open ward	2	0
7. Symptomatology		
Overactivity	37.7*	31.0*
Underactivity	22.2	15.0
Bizarre activity	41.0	14.0
Assaultiveness	45.0	50.0
Destructiveness	29.8	27.0
Impulsiveness	58.6	54.0
Irritability	61.8	58.0
Untidiness	37.4	38.0
Food refusal	9.4	5.0
Withdrawal	38.9	47.0
Suicidal attempts	5.5	1.0
Overt sex acts	6.3	1.0
Overtalkativeness	12.6	9.0
Mutism	20.1	11.0
Bizarre speech	26.0	9.0
Euphoria	3.0	2.0
Anxiety	22.4	10.0
Lack of interest	45.4	48.0
Depression	13.4	7.0
Inappropriate affect	40.2	20.0
Delusions	54.0	43.0
Hallucinations	38.8	38.0
Obsessive-compulsive features	10.6	10.0
Hypochondriasis	5.5	4.0
Poor memory	6.7	4.0
Disorientation	5.5	5.0

* Percent of group exhibiting respective symptom.

more than 2 years, a temporal point that, as implied previously, may be regarded as a critical level from the standpoint of spontaneous improvement. This difference is too minor to exert any significant influence on the comparative results in the 2 groups at the end of the present observation period. Both groups required essentially identical types of hospital care and environment at the onset of the experimental period. The incidence of specific symptoms is very similar in both groups particularly with respect to such prognostically pertinent features as combativeness, overactivity, and impulsiveness on the one hand and lack of interest, withdrawal, and underactivity on the other.

COMPARISON OF GLOBAL IMPROVEMENT IN LOBOTOMIZED AND CONTROL PATIENTS AT 2 YEAR LEVEL

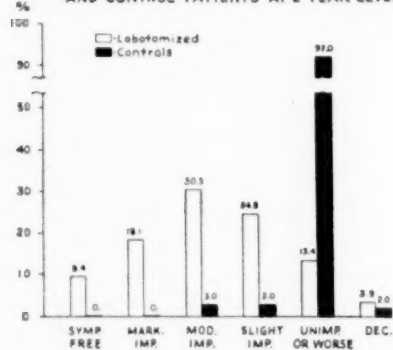


FIG. 6.

It may be safely asserted that both groups were composed of essentially similar clinical material.

Clinical results in the 2 groups of patients at the end of the present 2-year observation period are compared in Fig. 6. Only 3% of the control group exhibited significant improvement during this period—none at a level superior to “moderate improvement”—in contrast to 57.8% in the lobotomy group.

The environmental adjustment of the 2 groups at the beginning and end of the 2-year observation period is indicated in Fig. 7. In contrast to the marked diminution in the number of lobotomized patients who required restraint, seclusion, or confinement to a disturbed ward, there is no change in this direction among the controls. Only 2% of

the control group were released from the hospital as compared with 37% of the operative group. The 2 control patients who were discharged had been hospitalized less than 2 years prior to request for lobotomy. One of these exhibited moderate improvement later and has been able to adjust satisfactorily at home; the second patient left the hospital against advice and required rehospitalization at another institution within a few weeks after the expiration of the present

COMPARISON OF ENVIRONMENTAL ADJUSTMENT IN LOBOTOMIZED AND CONTROL PATIENTS AT 2 YEAR LEVEL

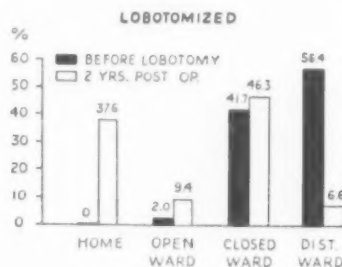


FIG. 7A.

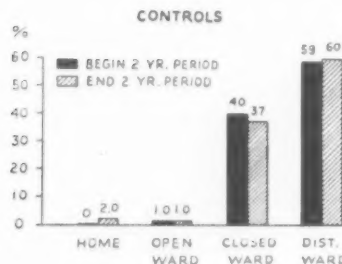


FIG. 7B.

2-year observation period. None of the controls who had been hospitalized more than 2 years at the onset of the present experimental period was able to leave the hospital.

With respect to deaths, one notes an incidence of 2% in the control group and 3.9% in the operative group. Of the 2 deaths among the controls one was due to heart disease and one to tuberculosis. It is pertinent to note that 2 more deaths, both due to pulmonary tuberculosis, occurred in the control group not long after the expiration of the present 2-year observation period. It seems

highly likely that during a 5-year interval the mortality in the 2 groups will be very similar.

It is pertinent to record that 21% of the control patients received intensive shock therapy during the 2-year period. The usual sequence of events in the administration of shock therapy to chronically ill schizophrenics was observed: temporary improvement that disappeared quite promptly after termination of treatment.

CONCLUSIONS

Previous reports in the literature have crystallized quite well the results effected by frontal lobotomy in the treatment of the major psychoses. Our present investigation, which deals particularly with dementia praecox, gives further support to previous conclusions. Apparently one can anticipate that some 50% to 60% of appropriately selected patients will exhibit significant improvement following frontal lobotomy, with approximately equal division between levels of moderate improvement and of marked improvement. There appear to be relatively few relapses with the passage of time—at least within a 2-year period—and, statistically, these relapses are compensated by other cases that exhibit their optimal improvement after a year or more of postoperative interlude. In general, results are somewhat better in affective disorders and other nonschizophrenic conditions than in dementia praecox. Among the latter, best results are observed in the mixed and paranoid subgroups. Symptoms related to tension and depressive states, emotional aggressiveness, and hyperkinetic behavioristic features are most amenable to lobotomy. This lends support to the implication emphasized by other investigators that the clinical results of psychosurgery are attributable to its influence on emotionally charged psychic phenomena, presumably through interruption of appropriate thalamic radiations. Our discharge rate of some 37% agrees closely with the statistics of other large series of cases. The most frequent significant complication, convulsive seizures, appears to occur in some 10% to 15% of patients. It is generally accepted that this is not a burdensome complication; it is readily controlled by anticonvulsant therapy. Opera-

tive mortality appears to range around 2% to 3%.

The problem of controls has been of particular interest to us in this study. It was decided that the most satisfactory controls would be patients who, like the operative group, had been selected for lobotomy according to currently recognized clinical criteria, but on whom operation could not be performed because of refusal of permission by the family. The 2 groups were well matched from the standpoint of various factors, especially in the pertinent features of diagnostic grouping and symptomatology. Although the mean duration of hospitalization was somewhat lengthier in the control group, the difference was not sufficiently pronounced to exert a significant effect on the final results. The great majority of both groups had been hospitalized longer than 2 years, a temporal point that appears to be critical from the standpoint of recovery spontaneously or by the aid of therapeutic measures other than lobotomy.

In contrast to the operative group, there was practically no change in the status of the control group at the termination of the 2-year observation period. Only 3% exhibited significant improvement—none at a level superior to moderate improvement. No significant long-term improvement was achieved in this chronically ill control group by the use of shock therapies. Only 2% were able to leave the hospital, and one of these patients required rehospitalization within a relatively short time. It seems evident, particularly with respect to dementia praecox, that the course of the illness will be well crystallized before the end of the second year of hospitalization. Improvement, either by spontaneous means or by the use of shock therapies, is rare after this point, and it would seem fruitless to delay psychosurgery in appropriate cases much beyond this time. Comparative results in our 2 groups lead to the inevitable conclusion that lobotomy exerts a beneficial effect that is not achieved by other means in cases of chronic mental illness.

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PSYCHIATRIC SYMPTOMS ASSOCIATED WITH INTRACRANIAL NEOPLASMS¹

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The diagnosis of intracranial tumors is, of course, not difficult if the typical triad of headache, vomiting, and papilledema is present. Unfortunately, this combination is usually a late rather than early manifestation of brain tumors. Obviously, if the patient is to obtain the maximum benefit of neurosurgical skill, it is necessary to diagnose these lesions early but this is all too often extremely difficult, if not impossible. Early diagnosis becomes even more difficult when the sentinel symptoms seem to be psychiatric, when psychiatric symptoms that develop later obscure the true nature of the disease, or when a brain tumor incidentally develops in a person with neurotic symptoms. This is especially true in the absence of papilledema and roentgenographic abnormalities of the skull. Brain tumors should always be suspected when there is a gradual progressive loss of function of that part of the nervous system contained within the cranium, since headache, vomiting, and papilledema are evidences of increased intracranial pressure rather than of a brain tumor *per se*.

In an effort to delineate the psychiatric manifestations associated with brain tumors the records of 128 consecutive patients with proved intracranial neoplasms seen at the Ochsner Clinic were reviewed. Excluded from this study were patients with metastatic lesions and children under the age of 7 years. Of the 128 patients, slightly more than half (51.5%) exhibited psychiatric symptoms on admission to the clinic (Tables 1 and 2). Some of these symptoms could be attributed to the effects of cerebral changes produced by the tumors, whereas other symptoms were less definite and seemed to be expressions of the patient's personality before the tumor developed.

In this series there existed a similarity in incidence and nature of psychiatric symptoms exhibited by patients with tumors of

TABLE 1
LOCATION OF 128 BRAIN TUMORS

Location	Cases	With psychiatric symptoms
Frontal lobe.....	45	32
Parietal lobe.....	22	8
Temporal lobe.....	25	19
Occipital lobe.....	1	1
Cerebellum.....	14	
Pons.....	3	1
Medulla.....	1	1
Third ventricle.....	2	1
Fourth ventricle.....	2	
Cerebellopontine angle..	7	
Suprasellar region....	2	1
Parasellar region.....	1	1
Optic chiasm.....	1	
Fifth cranial nerve.....	1	
Left lateral ventricle....	1	1
Total.....	128	66 (51.5%)

TABLE 2
TYPE OF BRAIN TUMORS (128 CASES)

Type	Cases	With psychiatric symptoms
Meningioma.....	23	9
Glioblastoma multiforme	44	32
Astroblastoma.....	5	3
Astrocytoma.....	23	11
Oligodendroglioma....	8	7
Spongioblastoma polare	1	1
Hemangioblastoma....	3	1
Medulloblastoma.....	3	
Sarcoma.....	3	
Unclassified glioma....	2	
Ependymoma.....	1	
Neurofibroma.....	8	
Craniopharyngioma....	1	
Papillary adenocarcinoma		
of choroid plexus....	1	1
Glioma of optic chiasm..	1	
Unclassified tumor....	1	1
Total.....	128	66 (51.5%)

¹ Presented before the annual meeting of the Southern Psychiatric Association in Williamsburg, Va., Nov. 27, 1950.

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the frontal lobe and those of the temporal lobe, with the exception that olfactory or visual hallucinations were manifest in patients with the latter type. In each case, by

the time the patients were admitted to the clinic, there was apparent a symptom or sign, such as headache, loss of consciousness, convulsions, or aphasia, that should have made the examiner suspicious that the patient's symptoms could not be considered purely psychogenic. This serves to stress the importance of obtaining a complete neurologic and psychiatric history and a careful neurologic examination in such cases.

The following case histories illustrate the diagnostic difficulties involved and emphasize the necessity of evaluating these patients *in toto*.

CASE 1.—A dynamic salesman, aged 55 years, came to the clinic with the chief complaint of "excessive nervousness for the past 2 years." The patient was extremely enthusiastic about his work and always led in sales. He always worked at a rapid pace and could not relax. When he was traveling, he got up at 5:30 a. m. and worked until 10:00 p. m. Although he had always been nervous and high strung, for the past 2 years he had been having strange nervous episodes that he referred to as "tizzies." He described these attacks in the following way. During periods of excitement he would feel as if "a small green vial turned over" in his abdomen, causing a "weak and tight" abdominal sensation; he then experienced tingling and weakness of the lower extremities followed by pressure on the top of the head and a peculiar distinctive odor that he likened to burning tar. The tingling was described as exaggerated "goose pimples." These episodes would usually last about 15 minutes, leaving him exhausted. Although infrequent at first, the episodes had become progressively more frequent. The patient had been subject to headaches all his life; these were usually occipital in location, but he had been experiencing a different type of headache in the left frontal area for the past 3 months. At operation an astroblastoma of the right temporal lobe was discovered.

CASE 2.—A woman, aged 49 years, with a hysteroid personality who was obviously theatrical in her behavior had had a great deal of marital friction that resulted in a legal separation 4 years before but a reconciliation was effected. Later, however, her husband beat her up causing much physical bruising and psychic trauma. About a month after this attack, she began to limp on her right leg; because of this limp, she, dressed in a nightgown, and acting with all the histrionics seen in a high school play, came in a wheelchair to the outpatient clinic. Positive neurologic signs led to discovery of a tumor of the left cerebral hemisphere at operation. If a thorough neurologic examination had not been done, this case probably would have been diagnosed as hysteria.

CASE 3.—A veteran physician, aged 36 years, seemed to have been depressed ever since reopening his office, about one year prior to admission to the clinic. While the history was being taken, it became evident that the patient was extremely slow to respond; he would hesitate for a long time after a question was asked. Some questions were readily answered and others would seem to produce a block and he would say, "I'll come back to that." He repeated the latter phrase 15 or more times during the interview. His father had recently had a stroke and his wife was expecting a baby in about 2 weeks but he was not worried about these things. When questioned about his depression, he would begin to cry quietly. A *grand mal* attack suggested the possibility of a cerebral lesion in spite of the fact that his optic discs were normal. At operation a glioblastoma multiforme of the left frontal lobe was found.

CASE 4.—A man, aged 62 years, was admitted to the clinic complaining of "frequent gas attacks" for about 9 months. These were described as "a warm whirling sensation" in the right upper part of the epigastrium. Then the sensation of heat would be replaced by what he called a "nervous feeling which would rise up in his chest." Sometimes this nervous feeling would go up into his nose producing an olfactory sensation like "a cat crawled into my nose and died." The attacks were making him extremely nervous. He wanted to know if he could possibly have syphilis of the stomach. On the day after admission he became disoriented and confused. A tumor of the right temporal lobe was found.

CASE 5.—A merchant, aged 56 years, was struck by an automobile and became unconscious immediately but he regained consciousness the next day in the hospital. He was able to recognize members of the family and his sensorium cleared in a few days but he began to exhibit personality changes. The most remarkable change was complete loss of interest in his business. In addition, he had a dread of being left alone and had also lost spontaneity. He would not join in conversations and, although he would answer direct questions, he seemed to have difficulty in forming his phrases. He could not make any precise statements. Gradual weakness of the right arm and leg developed. At operation a tumor of the left parietal lobe was found.

CASE 6.—A man, aged 48 years, came to the clinic because of extreme nervousness and headaches. For at least one year he had been neglectful of his business; actually he did practically nothing all day except read the newspaper, chat with his wife, and eat. His appetite had become ravenous, as evidenced by a gain of about 100 pounds in the past year. In fact, his appetite had increased so much that he would forcibly take food off the plates of the other members of the family. According to his wife he ate all the time and he had become irritable and sensitive about his appetite. His wife stated that

he made up untrue stories regarding people and "silly things like a child's mind would do." He had refused to see physicians until the week prior to admission. He had had headaches all his life, but for the past year had complained even more of headaches, which were worse when he would stand up from a sitting position and which "felt like hammers were pounding" in the occipital and frontal regions. Neurologic examination revealed objectively negative results. However, a pneumoencephalogram led to operation and the discovery of a meningioma of the right frontal lobe.

Particularly difficult at times is the early diagnosis of brain tumors in children because young children are unable to verbalize their symptoms, because headache, irritability, or unusual behavior may be considered a behavior problem, and because vomiting may be thought to be due to a gastrointestinal disorder.

Illustrative of this is the case of a child who began to have spells of violent screaming, the significance of which was not understood by the parents. Careful investigation revealed that the screaming was due to violent headaches caused by increase in intracranial pressure. A tumor of the fourth ventricle was found. Another example is that of an irritable, nervous boy aged 7 years who began to retire from the group and hide in the corner, not wanting to play with other children as he did formerly. He would not allow any of his family to talk or play with him. He had been having headaches for 3 months. A tumor of the third ventricle was found.

Although tumors of the frontal lobe are commonly considered to be associated with psychiatric symptoms with greater frequency than other types of intracranial neoplasms, it must be pointed out that such symptoms are associated with tumors of the temporal lobe just as often (Table 1). However, tumors of the frontal lobe anterior to the motor areas often do produce subtle peculiarities in the patient's personality that are insidious in onset. Other psychiatric manifestations, produced by frontal lobe tumors, appear gradually; these include impairment of memory (perhaps at first considered as absent-mindedness but later becoming a more obvious and serious memory defect); difficulty in concentration; a flattening of the affect coupled with a growing apathy regarding domestic and commercial affairs; carelessness in personal appearance; and use of obscene and facetious speech. Some degree

of apraxia may also develop in such patients. However, for the purposes of this study apraxia, aphasia, and related conditions have not been considered as truly psychiatric symptoms and patients showing such manifestations in the absence of other psychiatric symptoms were not included in the present series. Incidentally, it is important not to mistake apraxia, aphasia, and such related conditions for conversion hysteria or for the blocking seen in schizophrenia.

Illustrative of the psychiatric manifestations of tumors of the frontal lobe is the case of a middle-aged man with a tumor of the frontal lobe in whom the first abnormality noted was that he consistently neglected to zipper his trousers after using public urinals. Another patient, aged 58 years, was observed to do such odd things as attempt to fill her purse with potatoes in a grocery store; later she became forgetful and silent and her speech was confused. Still another patient with a frontal lobe tumor came to the clinic because of pain in the shoulder, which was found to be due to bursitis; during routine history-taking the patient also complained of easy fatigability, increasing irritability, lassitude and depression, difficulty in concentrating and recent forgetfulness. One patient came to the clinic with the chief complaint of fainting spells, but during the initial interview he admitted that he would forget to do things, *e.g.*, he would shave only one side of his face. Another patient was listless, apathetic, and forgetful. She would leave the fire burning when no food was actually cooking, and leave the water running in the bathroom until the tub would overflow. Finally, a man, aged 73 years, gave a history of a personality change of one year's duration. He became increasingly forgetful, would go to the store and bring back the wrong thing, would lose his sense of direction and get lost. This could have easily been mistaken for senile psychosis or psychosis associated with cerebral arteriosclerosis but aphasia and extreme somnolence supervened and a tumor of the left frontal lobe was found.

Neoplastic lesions of the temporal lobe are notorious for causing hallucinations, which may be visual, olfactory, or gustatory. Visual hallucinations typically are "formed," that is, visions of objects, but there may be exceptions. For example, one of our patients with a tumor of the temporal lobe had a "nervous breakdown" a few years before being seen and "unformed" visual hallucinations (flashes of bright lights) for one year. Gustatory hallucinations consist in peculiar tastes and olfactory hallucinations are peculiar odors that are usually described as un-

pleasant and likened to the odor of burning tar, asphalt, crude oil, gas, or cooking cabbage. These types of hallucinations may be associated with dreamy states and uncinate fits. In such attacks, things seem unreal and distorted to the patient; sometimes strange things seem familiar and at other times patients describe the feeling as if one has been in a dream. The dreamy state may be followed by a generalized epileptiform convulsion. Of course, tumors of the temporal lobe may cause aphasia.

Illustrative of the psychiatric manifestations of tumors of the temporal lobe is the case of a patient who complained of apathy, easy fatigability, forgetfulness, loss of libido, and finally drowsiness. Another patient complained of olfactory hallucinations, that is, he experienced the odor of "new shoes." Still another patient, a child, aged 7 years, was considered by the parents to be undergoing a personality change. The child had become negativistic and listless; he lost interest in school and did not like to go out to play any longer. In addition, he complained of headache and vomiting.

Other locations involved more rarely that at times pose diagnostic problems are the occipital lobe and third ventricle. Patients suffering from tumors of the occipital lobe may complain of visual hallucinations that are not "formed," that is, they may see flashes of light or color. Ball-valve tumors of the third ventricle in which the severe headache may be quickly relieved by changing the position of the head, because of the latter fact, must not be mistaken for conversion hysteria. Hypersomnolence may be produced by tumors involving the floor of the third ventricle; such somnolence is fre-

quently mistaken for narcolepsy or hysteria. Such patients may fall asleep while driving automobiles, while eating, or at other inappropriate times. Also, diencephalic autonomic epilepsy caused by tumors in this region must be clearly distinguished from purely psychogenic disorders, which such a condition might resemble.

SUMMARY

The presence of psychiatric symptoms in patients with intracranial neoplasms often increases the difficulty of recognizing the true nature of the patient's trouble. Such symptoms are frequently associated with brain tumors. A review of the records of 128 patients with proved intracranial neoplasms seen at the Ochsner Clinic revealed that approximately half exhibited on admission symptoms that could be considered "psychiatric." Alert suspicion during history-taking and examination is the best means of appreciably minimizing diagnostic errors, since there is usually apparent a symptom or sign that should serve to cause the examiner to exercise diagnostic caution.

In this series there existed a similarity in incidence of psychiatric symptoms exhibited by patients with tumors of the frontal and temporal lobes. Some psychiatric symptoms stem from the cerebral damage incident to the tumor and are fairly definite, whereas others are vague and seem to be part of the patient's previous personality, perhaps accentuated by his total reaction to his illness. Cases illustrating this point are cited.

THE CONCEPTION OF WHOLE AND PARTS IN EARLY INFANTILE AUTISM

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In 1943, under the title *Autistic Disturbances of Affective Contact*, I published 11 cases of infantile psychosis noticed as early as in the first two years of life. Since then, I have seen nearly 100 such children, and knowledge of many others has come to me from psychiatrists and pediatricians in this country and abroad. To satisfy the need for some terminological identification of the condition, I have come to refer to it as "early infantile autism."

Briefly, the characteristic features consist of profound withdrawal from contact with people, an obsessive desire for the preservation of sameness, a skillful relation to objects, the retention of an intelligent and pensive physiognomy, and either mutism or the kind of language that does not seem intended to serve the purpose of interpersonal communication.

The syndrome of early infantile autism is by now reasonably well established and commonly accepted as a psychopathologic pattern. The symptom combination in most instances warrants an unequivocal diagnostic formulation.

Its own peculiarities and the close relation to the schizophrenias invite a detailed study of the various features of the illness. A previous investigation of apparently irrelevant speech and metaphoric utterances yielded highly instructive material. In this study, an attempt is made to learn how these patients view their world in terms of appraising and integrating their surroundings.

The autistic child desires to live in a static world, a world in which no change is tolerated. The status quo must be maintained at all cost. Only the child himself may sometimes take it upon himself to modify existing combinations. But no one else may do so without arousing unhappiness and anger. It is remarkable to what extent the children will go to assure the preservation of sameness. The totality of an experience that comes to the child from the outside must be reiterated, often with all its constituent de-

tails, in complete photographic and phonographic identity. No one part of this totality may be altered in terms of shape, sequence, or space. The slightest change of arrangement, sometimes so minute that it is hardly perceived by others, may evoke a violent outburst of rage.

This behavior differs from ordinary obsessive ritualism in one significant respect: The autistic child forces the people in his world to be even more obsessive than he is himself. While he may make occasional concessions, he does not grant this privilege to others. He is a stern and unrelenting judge and critic. When one watches such a child for any length of time, it becomes evident that, unless he is completely alone, most of his activities go into the job of serious, solemn, sacerdotal enforcement of the maintenance of sameness, of absolute identity.

It is, of course, impossible to live even in Kaspar Hauser fashion without the introduction of new situations. A child is weaned from the breast, then from the bottle; new food stuffs are introduced; he is taken out for his first walk; the family may move to a different location; he learns new songs and nursery rhymes, is given new toys.

The reports of the parents of our autistic children indicate, indeed, how exceedingly difficult it is to "teach" them these, or any, innovations. One may even say that these children learn while they resist being taught. Several children kept on crawling at a time when the parents felt that they could be walking. Much effort was expended in propping them up and encouraging them to make steps. There was no success. But one day, suddenly, when it was least expected, the children got up and walked. The parents of Frederick W. spent hours each day "teaching" him to talk. They begged him to repeat words after them. He remained "mute," except for two words ("Daddy" and "Dora") that he had never been taught to say. But one day, at about 2½ years of age, he spoke up and said: "Overalls," a word

which was decidedly not a part of the teaching repertoire.

But once a new acquisition has been made or a new situation incorporated in the child's routine, he clings to it with exasperating tenacity and watches over its unaltered reproduction. This pertains to things said to him as well as to things done to him.

The mother of Joseph C. stated: "If I have read a story [to him] and used some pronunciation, his daddy has to do it the same way; else he is upset about it."

Since the whole must be preserved in its entirety, the children become greatly disturbed at the sight of anything broken or incomplete. The sight of a broken cross-bar on a garage door that he passed on his regular daily walk so upset Charles N. that he kept talking and asking about it for weeks on end, even while spending a few days in a distant city and even after the cross on the bar had been fixed.

Among the toys laid out for John F. were two dolls, one of which had a cap, while the other was bareheaded. Generally John paid little or no attention to dolls. When he noticed that the cap of one of the dolls was missing, he immediately asked for "the hat," picked up the doll and ran up and down with it, shouting for the hat. He was not reassured until the cap was produced. He made sure that it fitted, then put the doll down and lost all interest in it.

Susan T. noticed some cracks in the office ceiling and walls. She kept asking anxiously and repeatedly who had cracked the ceiling and could not be calmed by any answer given her. She was obviously unhappy and every time she was in the office, she kept exclaiming: "Who cracked the ceiling?" "How did it crack itself?" Anthony F. became aware of the same cracks and asked almost literally the same questions as Susan. He touched some of the cracks within his reach and said, very seriously: "I don't know whether it's right or not—the wall."

People as well as objects must be "whole." A visible scar or wart evokes instant comment. There is no sympathy, no solicitude for the person as such. The attitude is rather one of annoyance—again not with the person but with the fact itself. Susan T., on the train, became upset and talked obsessively

about "that one man sleeping with an open mouth." When a taxi driver cleared his throat, she kept asking him: "Did you have phlegm in your throat?" While she was fully absorbed and seemingly inaccessible in the office, I happened to clear my throat. Susan instantly looked up and asked: "What was that?"

Once blocks, beads, or sticks have been put together by the child in a certain way, they are often regrouped later in exactly the same way, even though there was no definite design. The children's memory is phenomenal in this respect. After the lapse of several days, a multitude of blocks could be rearranged, most astonishingly by Donald T. and Susan T., in precisely the same unorganized pattern, with the same color of each block turned up, with each picture or letter on the upper surface of each block facing in the same direction as before. The absence of a block or the presence of a supernumerary block was noticed immediately, and there was an imperative demand for the restoration of the missing piece. If someone removed a block, the child struggled to get it back, hitting the hand which held it and going into a crescendo panic tantrum until he regained it, and then promptly and with sudden calm after the storm returned to the design and replaced the block.

At home, the furniture arrangement, the location of bed and high chair, the position of the dishes on the table must not be changed. Frederick W.'s mother reported: "On one of the bookshelves we had three pieces in a certain arrangement. When this was changed, he always rearranged it in the old pattern." Herbert B. "wants the same arrangement at the dining table, the same dishes; if he notices changes, he is very fussy and cries." Jay S. "is very fussy about where things go, for instance, a certain tea set; he fusses till it is put right, cups, handles, etc.—just so." Joseph C. even "sees to it that the coal bucket is always turned in the same certain position." Gary T.'s father related: "Everything must be put in its proper place. He insists on closet doors being closed, rugs being straightened. He is very upset if the table order is changed and makes an effort to bring it back to the pattern he knows. He has a plaque of a sandman over his bed, of

which he is very fond; it was moved to another wall but he moved it right back. The furniture was rearranged lately and it bothers him. We bought him a new bed, and he was looking for the old one." Gary originally lived in Philadelphia; the family then moved to Greenbelt, to Chicago, and back to Greenbelt. At 5½ years, about 3 years since they had left Philadelphia, he still kept saying insistently: "Let's go back to the old house," meaning the home in Philadelphia, which he could describe in every detail. Richard F.'s high chair "always has to be in a certain place." Susan T.'s father said: "When we would sit down on a certain chair on which another member of the family usually sits, she would scream." Stephen N. "just can't stand things different from their usual appearance; for example, if my dress slips over my knee, he will pull it down."

Joseph C. had a definite notion about the arrangement of the parts of human bodies. While being observed, he at once became aware of an assistant's foot up on a chair. He became upset and rushed to the chair, saying: "Down, down," took her leg and put it down. When she put it up again, he repeated the procedure. He also became upset when a person had the legs crossed. He objected to hands being on the table or a person resting the chin on a hand. He demanded: "Down, down," and if his wish was not complied with, he became agitated and tried forcibly to bring the limbs into the position that seemed proper to him. Feet belonged on the floor, and arms alongside the trunk; no deviation was tolerated. He saw me smoke a cigar; he did not seem to notice it so long as the cigar was in my mouth. When I held it in my hand, he took my hand and pointed to my mouth, indicating that the cigar should be there. When he did not get his wish, he impatiently pulled the cigar out of my hand, pushed it between my lips, drew my hands down, and placidly turned to other pursuits.

Anthony F. was given the Seguin Form Board test, which he completed in 25 seconds. But he became disgusted with the star-shaped form. While quickly fitting it in the appropriate space, he said: "Star, you are bad." He took it out, hit it violently, and shouted: "Stay up in the sky!" He returned to the form board several times afterwards and

each time again became angry at the wooden "star" which was not up in the sky. He was then presented with the Healy Picture Completion set. He picked out the clock, found the right place for it, put it there with considerable anger and vehemence and said to it: "Stay there, you." He then had some difficulty in fitting the other pieces. This disturbed him very much. At first he "revenged himself" by squeezing the pieces wherever they would go, laughing uneasily and uproariously! Then he no longer could stand it, suddenly got up, ran to the door and, slamming it, went out, saying: "I think I go."

Malcolm H. liked to sit for hours turning the pages of books and magazines. Once he saw a picture in an encyclopedia and asked his mother what it was. She said that it was the Taj Mahal in India. He then went through the whole library for days looking for another picture of "India" (the Taj Mahal), really found two (one in a book on India, the other in a volume on architecture), and recognized them even though one was much smaller and the other was presented from a different angle. But he was very unhappy because of these differences, growing steadily unhappier and more agitated when further search proved unproductive. He finally found solace in getting the encyclopedia and looking at the picture he had seen there first.

The retention of sequences is as important to the children as the maintenance of appearances and space relations. Malcolm H., when taken for a walk, "insists on covering the same ground that has been covered on previous walks, resisting strongly any change in the route." Stephen N.'s mother stated: "Daily walks, when changed, used to make him furious; now he can be persuaded with some difficulty to go in a different direction." Richard F.'s father gives him a bath every night: "They go through a ritual. When I [the mother] give him a bath, he pulls me to show me what to do next. If the things on his bed aren't just right, he won't go to bed." When Elaine C. was sent to fetch a specific object, she always brought it if it was in the place where she knew it usually to be; if it was not there, she would not bring it even if it was very near and plainly visible. If Herbert B.'s bath time was changed in relation

to supper, he became very upset; usually he got his bath after supper. Of John F., his father said: "The daily routine, the route taken on the daily walks with his mother, the succession of events must be repeated in the same manner. Any change, even the slightest, gives rise to unhappiness and temper on his part." Donald T. would not leave his bed after his nap until after he had said: "Boo, say: Don, do you want to get down?" and his mother (whom he called "Boo") had complied. Donald then climbed out of bed. But this was not all; the act was not considered completed. Donald continued: "Now say: 'All right.'" Again the mother had to comply, or there was screaming until the performance had run its prescribed course.

The same Donald T., at 9½ years of age, had been "going to school" since he was 6 years old; a school principal friend of the mother's had agreed to let him attend. On one afternoon, the session had been dispensed with; no one in the family knew about this. Donald went to school as usual. Though no other child was in the classroom, he sat down in his seat, took out his books, did some writing, and left when the bell rang. He evi-

dently could not accept an "irregular" free afternoon contrary to established routine. The part had to be made to fit in with the accustomed whole, regardless of whether or not the teacher and the classmates chose to disrupt the ordinary sequence of events.

In summary, it can be said that autistic children show a peculiar type of obsessiveness that forces them to postulate imperiously a static, unchanged environment. Any modification meets with perplexity and major discomfort. The patients find security in sameness, a security that is very tenuous because changes do occur constantly and the children are therefore threatened perpetually and try tensely to ward off this threat to their security.

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INVOLUTIONAL ILLNESSES

A SURVEY OF 379 PATIENTS, INCLUDING FOLLOW-UP STUDY OF 114

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This paper presents a survey of some characteristics of 379 patients who were admitted to a private psychiatric institution during their middle and later years of life. Their illnesses were considered involutional on the basis that they presented no history of similar episodes before their middle years and no notable "evidence of organic mental defects" (49). Attention is focused on present-day sanitarium management of these patients. A follow-up study includes data on readmissions.

NOTES ON LITERATURE

There are ample historical surveys of melancholia (29, 36, 63) and of the changing ideas about the psychoses of the involutional period (25, 39, 51). Some early observations of psychological concomitants of the menopause have been reviewed (57). "Involutional syndromes" (10) with and without psychosis have been mentioned (6). Various clinical features of involutional psychoses have been considered: mortality (41), precipitating factors (39, 51) prognosis (7, 16, 28), Rorschach studies (33), sociological aspects (39, 40, 42).

Psychoanalytic observations of melancholia are reviewed in Fenichel's text (18). Psychoanalytic writings on involutional depressions as such are more limited (1, 32, 54). Several reports include psychological observations of middle-aged patients immediately after treatments and during the course of convulsive therapy (23, 35, 45, 47).

There are reviews (30, 61) with extensive bibliographies dealing with the convulsive therapies since the first reports by Meduna (metrazol) and Cerletti and Bini (electrical stimulus) in the 1930's. Attention has been given to complications (31, 37) including

deaths (17), and to theories of the mechanism of action (22). Freud (21) discussed functions that spontaneous convulsions may serve.

Tabulations have been made of discharge results, at various institutions, in involutional psychoses given convulsive therapy (19, 20, 44). Observations on relapses have been reported (34, 56). Some follow-up studies of patients with involutional psychoses are outlined in Table 1.

PRESENT STUDY

A study has been made of available case records on all patients admitted to Compton Sanitarium from 1920-1949 with illnesses diagnosed involutional. Sixty-seven of these persons had been patients of one or the other of the present authors. In all, 403 records were surveyed. Follow-up letters were sent inquiring about 352 patients. Eight patients were personally seen and a relative in the case of 2 others.

DESCRIPTION OF PATIENTS

Diagnosis.—Diagnoses in general were intended to conform to criteria approved by the American Psychiatric Association (49). Nine patients under the age of 40 years and 34 over the age of 65 were included. Eight cases considered involutional depressions of psychoneurotic type were also included. Forty-six patients had associated major "medical" diagnoses including leukemia, rheumatic heart disease, pernicious anemia. Twenty-four cases were discarded because of doubts about the diagnosis.

Incidence.—First admissions for involutional psychoses comprised an average of 5.3% of total yearly admissions to the sanitarium from 1933-1948.

Sociological Characteristics.—Comparison of groups with and without convulsive ther-

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apy disclosed no major differences in the categories of race, nativity, occupation, education, religion, marital status, percentage with children, and alcoholic patterns. Certain differences are noted between New York and Massachusetts state hospital patients (11, 42) and the sanitarium patients of this present study. Compared with the California populace, a higher percentage of these patients had professional occupations, and a higher percentage had college educations (59).

Menstrual Data.—Of 157 women, 7% were menstruating regularly at the time of

zol alone was given to 16 patients, metrazol along with ECT to 8, insulin and ECT to 2, and ECT alone to 212.

The ECT technique varied somewhat over the years. Bitemporal electrodes have been in consistent use. From 1941-1945 the Rahm machine was employed; from 1945-1949 the Offner machine; in 1949 the Dale machine with "glissando" technique. In all but 28 cases the treatments have been preceded by intravenous curare. Intravenous sodium pentothal has also been used since employment of the glissando technique. The average

TABLE I
FOLLOW-UP RESULTS OF CONVULSIVE THERAPY IN INVOLUTIONAL PSYCHOSES AS NOTED IN SOME PREVIOUS STUDIES

Physicians	Year	No. of patients	Therapy	Follow-up period	Follow-up status			
					No CT		With CT	
					R	R and I	R	R and I
Bennett	1939	24	Metz	3-18 mos.	..	..	46%	96%
Wilson	1939	19	Metz	6 mos.	..	..	73%	78%
Bennett and Wilbur....	1944	41	ECT	3-63 mos.	..	..	61%	90%
Alexander	1945	32	ECT	30 days after final ECT	..	..	41%	*
Tillotson and Sulzbach.	1945	21	ECT	1 year	..	..	52%	72%
		17	No CT	1 year	0%	53%	..	..
Ziskind et al.....	1945	22	CT	6-69 mos.	..	..	81%	86%
		17	No CT	6-69 mos.	57%	64%	..	..
Hamilton and Ward....	1948	60	ECT	1-5 years	..	..	48%	80%
		100	No CT	7-16 years	32%	42%	..	..
Huston and Locher....	1948	61	ECT	6-48 mos.	..	..	†	80%
		93	No CT	1/15-180 mos.	46%	..	..	..
MacKinnon	1948	9	ECT	1-3 years	..	..	46%	68%
Morrow and King.....	1949	45	CT	1-10 years	..	..	71%	89%

Notes: CT—Convulsive therapy.
ECT—Electroconvulsive therapy.
Metz—Metrazol.
R—Recovered.
I—Improved.

* 84% "eventually" R and I.

† 65% R at end of 2 years.

their illness, 39% had menstruated at least once during the preceding 2 years, 34% (without artificial intervention) had not menstruated for more than 2 years, 20% had undergone surgical or radiation menopause. Three women who gave histories of amenorrhea for 2, 5, 11 years, respectively, experienced another period of flow while hospitalized.

THERAPY

As noted in Table 2, convulsive therapy, in the form of metrazol, was instituted at the sanitarium in 1938; electroconvulsive therapy (ECT) was started in 1941. Metra-

number of treatments given (per admission) was 8.2 for melancholias, 9.3 for other types.

Treatments were given to a number of patients with noteworthy anatomical abnormalities, including 26 with significant cardiovascular abnormalities, 4 with herniae, 1 with pulmonary tuberculosis of low-grade activity (the latter withstood therapy uneventfully). Twenty of the patients receiving convulsive therapy were over 65 years of age.

DISCHARGE RESULTS

The average stay in the sanitarium was 51 days for those who were given convulsive

therapy, 248 days for those without such therapy. However, many of the patients who did not receive convulsive therapy left during the first month. Impressions of the patients' conditions on discharge are indicated in Table 2.

Some disturbance in cardiac function was noted in at least 7 patients during the course of convulsive therapy. Record was made of 3 neurological complications: 2 patients developed head tremors (one had a history of chorea in childhood); 1 patient experienced

TABLE 2

SOME CHARACTERISTICS OF THE 379 PATIENTS IN THE PRESENT STUDY

A. Sex, diagnostic subtype, therapy

Diagnosis (subtype)	No convulsive therapy				Convulsive therapy	
	1920-37		1938-49		1938-49	
	Fem.	Male	Fem.	Male	Fem.	Male
Melancholia	35	8	42	16	126	45
Paranoid	6	0	15	1	37	5
Others	4	0	12	2	22	3
Totals	45	8	69	19	185	53
	141				238	

B. Age, duration of illness

	Women		Men	
	CT	No CT	CT	No CT
Mean age on admission (years)	51.7	51.6	56.6	60.0
Duration of illness				
1 year or less	83%	79%	76%	78%
More than 1 year	17%	21%	24%	22%

C. Responses to therapy: Discharge results (%)

MELANCHOLIA						
Rx	No. of patients	R	I	S	U	D
CT	171	61%	26%	5%	6%	2%
No CT	101	8%	32%	15%	37%	8%
PARANOID						
CT	42	48%	35%	7%	10%	0%
No CT	22	14%	24%	19%	43%	0%
OTHER TYPES						
CT	25	56%	44%	0%	0%	0%
No CT	18	16%	42%	5%	37%	0%

Notes: CT—Metrazol and/or electroconvulsive therapy.
 R—Recovered. Remission of symptoms.
 I—Improved. Severity of symptoms decreased.
 S—Slight improvement.
 U—Unimproved.
 D—Dead.

COMPLICATIONS

In 238 patients receiving over 2,200 treatments, note of complication was made in 33 cases. Multiple complications were recorded for 4 of these patients. Twelve patients sustained known fracture or dislocation. Among the patients with fractures were 2 of the 28 who had not received curare. A period of severe cyanosis in one patient was the only complication attributed to curare.

a generalized convulsion several hours after a treatment.

During the course of therapy 7 patients experienced further marked change in behavior that necessitated confinement in a closed building. Some of these patients became markedly disoriented and combative. In 2 cases, psychotic symptoms subsided after institution of metrazol treatments.

FOLLOW-UP RESULTS

The 1949 status of 126 patients was known; 12 had died during their sanitarium stay, and follow-up information was obtained on 86 women and 28 men who had

engineer, a musician, a cinematographer, a business executive.

The follow-up results were analyzed in several ways: age, sex, marital status, diagnostic subtype, duration of illness, relationship of illness to menopause, coincidence of

TABLE 3
FOLLOW-UP SERIES

(A) Composition:

Diagnostic subtype	With CT		No CT	
	Men	Women	Men	Women
Melancholia	20	43	4	12
All others	3	26	1	5
Totals	23	69	5	17
Mean age on admission (years)	59.1	54.0	56.9	52.6
Range	45-70	38-71	45-74	43-65
Standard deviation	6.7	8.8	9.7	5.8

(B) 1949 Status of 114 Patients Followed 3 Months to 14 Years:

Year of admission	With convulsive therapy					No convulsive therapy				
	R	I	U	H	D	R	I	U	H	D
1935 .....	..	..	..	..	..	I	..	..	..	I
1936 .....	..	..	..	..	..	I	..	..	..	I
1937 .....	..	..	..	..	..	..	..	..	..	..
1938	I	..	..	..	..	..	..	..	I	..
1939 .....	..	..	..	..	I	..	I	2	..	I
1940 .....	..	..	..	I	..	..	..	..	..	..
1941	4	..	..	..	I	..	..	..	..	I
1942	4	..	..	I	..	..	..	..	..	..
1943	I	..	I	..	I	..	..	..	..	I
1944	I	..	2	..	3	I	I	..	I	..
1945	12	I	I	I	I	..	..	..	..	..
1946	6	3	I	..	I	..	I	..	..	2
1947	8	2	..	I	..	..	..	..	..	..
1948	11	6	I	3	3	I	I	..	..	I
1949	6	..	..	2	..	..	2	..	..	..
Totals	54	12	6	9	11	4	6	2	2	8
Percent	58%	13%	7%	10%	12%	18%	27%	9%	9%	37%

Notation:

R—Recovered. Living in community; able to do former work. No symptoms.

I—Improved. Living in community. Symptoms decreased.

U—Unimproved. Living in community. Symptoms pronounced.

H—Hospitalized.

D—Dead.

been discharged 3 months to 14 years before this study. Composition of the series and the follow-up results are indicated in Table 3.

Patients were not considered "recovered" unless the follow-up information indicated that they were capable of performing their former work. Among the patients able to do their previous work were a school official, an

cardiovascular abnormalities. Statistical considerations make generalizations seem unwise for most of these groups. However, in this series, results were not as good in patients with known heart disease, and in older patients; results were somewhat better in melancholias, and in males. In the other categories, no appreciable differences were noted.

DEATHS

There have been 31 known deaths; 19 were in the follow-up series. (Calculating from U. S. Census Bureau figures, roughly no more than 10 deaths were to be expected in the follow-up series.) Mental status at the time of death was apparently unimproved for all but 4 of 27; of these 4, improvement was only slight in 3. Four of the 12 patients who died in the sanitarium had received ECT; 1 death occurred 1 day after the 5th treatment, 1 committed suicide after 1 treatment, the other 2 lived 2 and 3 months after treatments were concluded. Of 7 suicides, 4 were men. Of the total deaths, 10 were in men.

READMISSIONS

Table 4 summarizes the data on patients known to have been admitted more than once

TABLE 4
MULTIPLE ADMISSIONS

	Follow-up series (114)	Total series (379)
Readmitted after:		
Previous inpatient CT.....	39	74
No known inpatient CT....	12	64
No CT on first admission; later CT, no further ad- missions to date.....	5	8
Totals	56	146

to a psychiatric hospital or rest home. At least 28 men and 118 women had had such multiple admissions, and at least 19 patients had been admitted more than twice. In the follow-up series, of the 92 patients who received convulsive therapy, 39 had been readmitted after having received such therapy on a previous admission; 32 of these had 4 or more treatments on their previous admission, 3 had less than 4 treatments, and information on the others is incomplete. Readmission rate in the follow-up series was 34 in 79 melancholias, 22 in 35 patients of other types.

COMMENTS ABOUT DATA

In evaluating the data, certain points are to be recalled. These patients were in a private sanitarium. (This circumstance is

expected to affect such factors as social characteristics, discharge results, duration of hospital stay. For example, only 1 patient admitted since 1938 with the involutional diagnosis has been in the sanitarium over a year). The ages cited are ages at the time of first admission to the sanitarium. Subjective variations in describing the duration of the "illness" before admission affect such considerations as the relationship of the illness to the menopause. Spontaneous comments written by relatives on the questionnaire forms were of great help in assaying the condition of the patients.

SUMMARY OF RESULTS

A survey has been made of 379 involutional patients who had been admitted to a sanitarium. Two hundred thirty-eight patients were given convulsive therapy from 1938-1949. Eighty-eight admitted during the same period and 53 admitted from 1920-1937 did not have such therapy.

The 238 patients who received convulsive therapy were given over 2,200 treatments. Twelve patients sustained known fractures or dislocations. Seven patients experienced further marked behavior disturbances during the course of therapy.

The 1949 follow-up study included 114 patients who had been discharged from 3 months to 14 years previously. Of 92 patients who received convulsive therapy, 58% were recovered, 13% improved, and 29% unimproved, hospitalized, or dead. Of 22 patients who did not receive convulsive therapy, 18% were recovered, 27% improved, and 55% unimproved, hospitalized, or dead. These results (in patients who received some measure of psychotherapy in addition to convulsive therapy) are no better than results reported by Huston and Locher from their study of Iowa state hospital patients (see Table 1).

In the follow-up series, over one-third of the patients who received convulsive therapy had subsequently been readmitted to a psychiatric hospital or rest home; however, at the time of this study only 9 of the 92 who had received convulsive therapy were hospitalized.

DISCUSSION

Historically, it would seem that approaches to the study of hospital inmates first had to be secured by diagnostic names. Among these, "involutional psychoses" was included in Kraepelin's classification (14) until 1907 when he concurred with Dreyfus' (15) proposal that the term be discarded and that all psychotic depressions be subsumed under the "manic depressive" diagnosis. This diagnostic issue remains undecided for some at present. *A Standard Classified Nomenclature of Disease*, approved by The American Psychiatric Association, listed "involutional melancholia" as a diagnosis in 1933; the 1935 edition included the diagnostic term "involutional psychoses" with the subtypes of the present nomenclature.

Ideas about the "cause" of this "disease" have undergone considerable modification. Numerous articles opposed the view that the menopause is the sole cause. Palmer and Sherman in 1938 emphasized the importance of life patterns existing before the appearance of symptoms. Controversy over psychological and somatic causes of these as of other psychiatric problems seems to be waning since the emphasis in recent years on the study of the patient as an individual. The 1941-1949 studies of Malamud's group emphasized the significance of the total life situation.

The general concepts of disease and cause are continually being re-examined in an attempt to dispel some of their residual animistic connotations (43, 55). For this discussion, the wording "unusual forms of behavior" will be substituted for "disease"; "is a function of" will supplant "is caused by."

A reconsideration of the term involutional psychoses also seems in order. Since, in the customary usage, the involutional years span (for most people) the fifth and sixth decades and include the time of the menopause in women, attention can first be turned to behavior associated with the menopause.

Among a thousand women studied in England (9), about 85% experienced some symptoms, such as flushing, during the menopause; only 10%, however, were incapacitated. About 30% of the women in that

study noted "nervous" symptoms. Given a thousand 40-year-old women in New York state (calculating from Malzberg's (42) 1939-1941 statistics on first admissions) roughly 5 to 8 of them would be expected to enter a state hospital and receive the diagnosis of involutional psychosis during the succeeding 15- to 20-year involutional period. In Malzberg's 1940 statistics, 63% of all first admissions were aged 40 or over (compared with the general New York population of whom 37% were aged 40 or more). Among these older patients, involutional psychosis has not been the most frequent diagnosis; in the 40 to 60 age group in Dayton's (11) 1917-1933 Massachusetts study, dementia praecox and manic-depressive were most frequent, and in the 50 to 60 age group, psychosis with cerebral arteriosclerosis was also slightly more frequent. Malzberg notes an upward trend in the number of first admissions diagnosed involutional psychosis, especially since 1930. Changing diagnostic criteria must be kept in mind in evaluating the statistics.

As is apparent from such statistical considerations, the reactions during the involutional years are varied; in addition to various psychotic forms there may also be neurotic and, as Deutsch (13) mentioned, "acting-out" patterns. At present the type of reaction is thought to be largely a function of the previous personality. There is probably significance in the fact that, for the original involutional diagnosis, melancholia was singled out.

Attention here will also be focused principally on the depressive reactions. Although most of this discussion is devoted to observable behavior—the environmental interface, so to speak—there is no intent to minimize the significance of changes within and outside this interface.

What is depression? Cameron (8) among others has attacked the problem of clearer definition. As usually regarded, depressions feature marked decrease in social relationships and in motility. Depressions have customarily been qualified as agitated when there was much motion or talking. The appearance of depressed patients in this study was not strikingly different from that noted in previous descriptions: those diagnosed agitated

depressions moved about restlessly, repeatedly wailing protestations on one main theme—usually ideas of guilt, unworthiness, or of disturbed body intactness (such as “my uterus is dead”). Their feelings of guilt were unchanged by any reassurance.

DeJong(12) has suggested that at least one type of psychotic behavior, catatonia, is, like a convulsion, a reaction form of the central nervous system that may appear in response to various stimuli. Psychotic depression, similarly, may be a form of behavior present at least potentially in all people. Present evidence is insufficient for conclusions about the universality of such a pattern or of its possible developmental origins.

Others have described even psychotic behavior as a mixture of old and new patterns and actions, with perhaps one feature predominant. One example of such a distinction has been cited in the case of agitated depressions: some regard the agitation as the persistent remnant or the reappearance of more integrated behavior in “restitutional attempts.”

Is the depressive pattern of the involutional years the same as in earlier years? Many reports mention agitation more frequently in the former. If the agitation is regarded as an admixed feature, attention must later be turned to the person's total integrating mechanisms.

What part do the changes peculiar to the involutional years play in precipitating these depressions? Among the usual involutional changes in women are those physically measurable ones such as the changes in blood estrogen levels(26). In evaluating the relationship of such changes to the appearance of psychotic behavior, several problems are encountered: (a) deciding which changes are climacteric ones, since the climacteric is not limited entirely to the time of the menopause (60); (b) determining accurately the time of cessation of menses; (c) examining the possibility of delayed response to change, as in denial by fantasy.

Awareness of changed sexual feelings was noted in many women in this study, as in others. (One woman complained, “I've had an overdose of cantharides.”) Benedek and Rubenstein(3), with concomitant vaginal

smear and psychoanalytic studies, found correlations between certain changes in behavior and the various phases of the menstrual cycle in 15 women aged 25 to 37 years. Use of such a technique in the study of menopausal women has not yet been reported to our knowledge.

There remains the difficult problem of establishing the relationships between changes in function at the “somatic level of integration”(50) and changes in behavior presumably integrated at levels associated with greater consciousness.

In what ways are the precipitating circumstances similar to those noted in depressions of earlier years? Freud's comment that the initial episode of depression in general follows loss of love objects may well be applied here, if we indicate that “love object” also includes the person's own self. In our patients, history of recent loss of a spouse was noted often, but not as frequently as evidence of unusual concern about the decline of the “self,” including bodily involution. Rado(52) observed that people inclined to depressions have great dread of impoverishment. Certainly, many of the circumstances attending the appearance of involutional depressions are keyed by impoverishment: impoverishment of relationships with people and material surroundings; impoverishment of self-esteem, of physical integrity, and finally of motion (including facial expression), sleep, appetite, and weight.

Even if we regard the depressive pattern as a reaction to impoverishment (as far as precipitating factors are concerned), there remains the question of why the pattern appears in only a relatively few people, and, among those, at various ages. Assuming that psychotic depression becomes manifest only when usual behavior fails, a consideration of the usual behavior, which we shall call “personality,” becomes necessary.

As described by most previous writers, the personality of the people who develop involutional depressions may be summarized as “tightly sphinctered.” They do not seem free to express strong feelings, hostile or loving; in fact, during the psychotic episode they do not even shed tears. Information of the degree of freedom in coital motion might

also be enlightening. Further indication of the control exercised is found in statistics on certain social characteristics: the incidence of abstinence from alcohol(42) and the conformity to accepted marital patterns. The social antitheses of such patients would seem to be the psychopaths.

Abraham(1) observed that manic-depressive patients in free intervals also use rigid control. Presumably then this type of defense is generally used against the forces that culminate in depression. Why is the control effective for a longer time in the involutional patients than in the average manic-depressive? At least quantitative differences are to be expected in the personality organizations. The premorbid personalities have frequently been contrasted (with regard to general mood) as inflexibly level in the involutional depressive and inflexibly undulating in the manic-depressive. Although in both types there seems to be a notable appreciation of love objects and their loss (contrast with many schizophrenics), the involutional patients have established long-term relationships with people that are at least minimally satisfying, whereas manic-depressives seem to establish only transiently satisfying relationships. In accounting for the differences, the development of mechanisms for relating to people would need to be considered but cannot be discussed here.

In making a final practical judgment about the usefulness of the term involutional psychoses, response to a particular therapy can be a crucial criterion. Our findings reaffirm the reported increased incidence of long-term favorable responses in involutional depressions given ECT (contrast with follow-up reports(53) of manic-depressives), and also the high frequency of favorable responses immediately after such therapy in other psychoses first appearing during the involutional years.

After adopting this therapeutic orientation, therapeutic methods should be considered further. In appraising ill effects of ECT, a few Rorschach studies were inconclusive to us (especially in the absence of a reliable standard of measuring the spontaneous decline in an individual). The patient's functioning in usual activities remains one of the most useful guides in such a study.

Our previous implication that psychotherapy may be of little value in these patients perhaps should be amplified. The patient's capacity to reintegrate following ECT is quite surprising and we get the impression that the rigidity of maintaining old patterns (rebuilding the walls against ambivalence in Rado's phrasing) may be proportional to the tenacity with which delusions are maintained during the psychotic episode. Abraham(1) has indicated the theoretical possibilities of psychoanalytic therapy in his report of success with 2 men diagnosed involutional depressions (he had a 6-year followup on one 50-year-old man). Nevertheless, particularly in view of the limited psychoanalytic facilities, Freud's early observation that psychoanalytic therapy should be reserved for people under 50 seems especially applicable to most of these patients.

Of major importance in subsequent considerations will be the mechanism of action of convulsive therapy. Prior to ECT, the patient's motor activity is restless, perseverating, and evidently ineffectual; after a series of induced convulsions the patient resumes his usual forms of motion (including facial mobility) and relaxation (including sleep), as Myerson(48) noted.

CONCLUSIONS

Judging from a study of 379 sanitarium patients with follow-up information on 114, the previously reported effectiveness of convulsive therapy in involutional psychoses, especially in depressions, is reaffirmed, as is the low incidence of complications with such therapy. At present, convulsive therapy, supplemented by less intensive psychotherapy (as contrasted with psychoanalysis) appears to be the therapeutic program of choice in these patients. With a therapeutic orientation, the diagnostic term involutional psychoses appears to retain its usefulness. Further study of motor discharge in induced convulsions may help elucidate the mechanisms of psychotic depressions. Other long-range follow-up studies would be of value in determining the future course and ultimate results of electroconvulsive therapy in patients who have suffered from involutional illnesses.

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THE PSYCHODYNAMICS OF FAILURE IN THERAPY¹

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The purpose of this paper is to evaluate certain aspects of therapeutic experiences at the Wayne County Mental Health Clinic during its first year of operation. Funds for the clinic were provided by the Wayne County Board of County Institutions for the purpose of treating ambulatory patients with personality disorders, and as a measure for the prevention of more serious mental illnesses. The clinic opened December 13, 1948. The professional staff now includes a supervisor of therapy, 2 psychiatrists, and 6 psychotherapists, of whom 2 are clinical psychologists and 4 psychiatric social workers. The psychiatrists, in addition to treating patients, supervise the work of the lay therapists. The clinic carries a case load of about 100 patients. Patients are expected to pay a fee within their means, which has averaged a little over a dollar per hour.

During the first year, 268 patients were accepted for treatment. After completing the intake procedure, 55 patients failed to come for their first therapeutic hour. Some of them stated that they were relieved in discussing their problems during intake interviews, which we were inclined to interpret as a flight into health. Others were unable to acknowledge that their symptoms were emotional in nature. Of the remaining 213 patients, 98 are currently in treatment, 61 (29%) were discharged as improved, and 54 (25%) were terminated as unimproved.

In reviewing our therapeutic failures, it should be remembered that a public agency such as this clinic has a definite responsibility to the community and is obligated to accept poor therapeutic risks in fulfilling its purpose. Thus, although the majority of our patients are psychoneurotics, we also have under treatment psychotics, sexual deviates, epileptics, etc. The diagnostic classification of the 54 therapeutic failures include 42 psychoneurotics of all categories, 5 psychotics,

5 sexual deviates, and 2 epileptics. Ultimately, the evaluation of the patient's progress was determined by each therapist, but the following criteria for improvement were considered in forming an opinion:

- (A) Has the ego been strengthened?
- (B) Is more energy available for dealing with the environment?
- (C) Has there been any reduction in symptoms?
- (D) Does the patient still use the same defenses?
- (E) Has the patient's insight increased?
- (F) Has there been improvement in sexual adjustment?

Twenty-seven, or one-half, of the patients classed as failures had less than 4 hours of treatment. In a few instances, the reason why a patient dropped out so soon was clear-cut. One patient, for example, stopped coming after discovering that Negroes were also treated; another patient, a paranoid, severed connections when we didn't stop his wife's alleged infidelity and adulterous activity. However, too little was known about most of this group to draw valid conclusions, and they were excluded from further consideration. Study of the remaining 27 cases revealed that inadequate motivation for treatment, resistance, and failures due to inadequacies of the therapist were the most significant causes of unsuccessful treatment. Usually, more than one factor was involved, although often a single factor played a dominant role. In a few of our cases, the dynamics were not sufficiently clear to us to reach a satisfactory evaluation. Several patients, notably the psychotics, but also a few psychoneurotics, had to be hospitalized during therapy. These likewise were included under treatment failures. These patients either suffered a break in social adjustment, or could not cope with their anxieties.

In our series, motivation for treatment was found to be one of the most important factors in success or failure. In many instances, motivation was weak or ulterior in purpose, or practically absent in those cases

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coming to the clinic because of external pressure. Such patients manifested too much resistance to work through to their conflicts. This is most clearly seen in sex deviates referred to us by courts for treatment as a condition of their parole. They kept their appointments punctually, but generally tended to associate us with law enforcement authorities and reported to us in the manner of visits to a parole officer. None of these showed internal anxiety, nor could any be mobilized. Indeed, they resented being sent to a psychiatrist since they did not consider themselves "crazy," and their hostility was either expressed openly or concealed by obsequious attitudes. Therapeutic sessions consisted of unwilling or sullen responses or polite conversation. Although recognizing that sex deviates are therapeutically difficult, nevertheless, it was not the sex deviation *per se*, but the coming into treatment under outside pressure that made the prognosis poor. We have sex deviates as voluntary patients who are making satisfactory progress.

Like motivation, resistance was a partial factor in many of our cases, and the major cause of failure in several. Usually, resistance was manifested either through persistent denial of the emotional basis of their physical symptoms, or refusal to accept implications of interpretation after progressing up to a point. It appears that these patients either clung to physical symptoms to avoid the stigma of mental illness, or rejected the meaning of their behavior because such recognition was too threatening.

In our type of clinic, failures due to the therapist assume considerable importance. These lie in the area of transference and countertransference problems. Therapists were sometimes unaware of, or tardy in recognizing, transference situations; or, if aware, failed to act on their knowledge or did not handle the transference adequately. In some instances, therapists became too closely identified with their patients and lost their objectivity. They were so involved in the problems of the patients they could not see what was happening or the direction the treatment was taking. Some therapists utilized the patients for projecting their own conflicts or needs. In several cases, the therapist was unable to cope with the hostility that is often encountered in treatment,

feeling threatened by the patient's aggression, or his own counter-hostility interfered with progress.

We have chosen 4 cases to illustrate these problems.

CASE 1.—A 27-year-old W.W. II veteran was referred by the Veterans' Administration, complaining of numerous somatic symptoms, irritability, and a trigger temper. In treatment, the patient expressed marked resentment toward the army and people in authority. He displayed considerable psychiatric knowledge for a layman. Quite early, he casually asked about the meaning of his army diagnosis, the outlook for improvement, the reason his condition was not service-connected, and wondered if we would help establish service-connection of his disability if our findings justified it. The therapist replied briefly to these inquiries, made no promises. Further remarks in this area were not encouraged since it was felt the patient was simply manifesting another aspect of his conflicts with authority. As treatment progressed, the patient voluntarily acknowledged improvement in his physical symptoms and ability to get along with people. In a later treatment session, he abruptly announced that he was cured, glowingly praised the benefits of psychotherapy, and terminated treatment. It was the therapist's belief that the patient avoided probing of his neurotic gratifications by a flight into health. Three months later, the patient was again seen because of a relapse, and during the interview frankly admitted that originally he had come to the clinic to have us establish service-connection of his disability so he would be eligible for a pension.

Discussion.—This case was a therapeutic failure for two reasons: ulterior motivation and failure to deal with motivation in treatment. Had motivation at intake interview been thoroughly explored, the patient's real purpose for coming into treatment might have been unmasked, or at least motivation would have been recognized as the area to clarify in therapy.

In treatment, the patient provided several opportunities for dealing with motivation. The patient's "casual" questions concerning his disability and service-connection, particularly when contrasted with his usual pattern of "marked resentment toward the army," should have alerted the therapist to the significance of these inquiries and the purpose behind them thoroughly probed. The patient further revealed his ulterior motivation in his "glowing praise" of psychotherapy and "flight into health." It was noted the patient possessed "considerable psychiatric knowledge" and probably knew the army diagnosis implied constitutional factors. By his be-

havior, the patient attempted to present a clinical picture favorable to his purpose. The therapist remained passive instead of actively dealing with motivation. He missed the meaning of the patient's verbalizations and actions. It was only in retrospect that the therapist, also a W.W. II veteran, recognized that his own attitude toward the army interfered with adequate handling of the patient's manipulations.

CASE 2.—A 20-year-old girl was referred by the Special Education Advisor of the Board of Education. When asked to state her problem, she replied, "No special problem; just disgusted. All I wanted was peace of mind." She repeated several times she was not smart. She was taking a course in practical nursing. She ventilated considerable hostility toward her mother, whom she described as a nagging, domineering, overcritical woman. She spent considerable time discussing the latest evaluation of her nursing work by one of her supervisors who criticized the patient for lack of self-confidence and having a whining voice. The patient felt both complaints were completely unjustified. The tentative diagnosis was primary behavior disorder.

The patient was in treatment for 4 months. During the first few interviews, she revealed the need for excessive sleep, 14 to 16 hours a day. As treatment progressed, she began coming late for appointments and expressed a great deal of guilt about this while protesting her desire to be punctual. Later, she kept appointments irregularly, and it was seen that broken appointments occurred after particularly disturbing interviews. She complained bitterly of her mother's overprotective attitude and of her rebellion against it. In one interview, she remained completely passive and was able to verbalize no more than a few sentences before she began to protest she was sleepy and wanted to go home. Efforts to get her to elaborate on her difficulties were of no avail. In the interview that followed, she became physically ill after a few minutes and asked to go home. In what turned out to be the last interview, the patient revealed that her practical nursing placement was on a probationary basis, and that her training was contingent on her psychiatric treatment. It was not until she was finally convinced that she had graduated with honors that she could tell this.

Discussion.—Treatment failed in Case 2 because of the following reasons: ulterior motivation, incorrect evaluation of the patient's psychopathology, and failure to deal actively with resistance.

Exploration of the reason for the referral of the patient to us and questioning of her vague complaints would have helped reveal the ulterior motivation. If motivation had been dealt with first, then the subsequent

resistance could have been dealt with. Instead, the ulterior motivation served as a blanket that made it impossible to make progress in any area that was revealed. As soon as the motivation was revealed, and only when it was safe to do so, did the patient's suggestively gloating and triumphant quality become evident. Ulterior motivation is not a contraindication to progress, but simply adds to the difficulties.

The faulty evaluation of the diagnostic picture was due to insufficient alertness to the vagueness of the complaints initially and permitting them to go unquestioned, instead of requiring of the patient more specific and extensive elaboration of the difficulties that led her to come to the clinic. It should have been recognized that the complaint had an odd, concealing quality to it that required exploration. It is not the type of complaint usually heard from patients suffering from relatively benign personality disorders. Had the complaint been questioned initially, treatment would have started with a clearer clinical evaluation of the patient.

In treatment, the patient presented clear-cut evidence of resistance to exploration of significant material by withdrawal into sleepiness, missing appointments, physical illness, and hostility whenever such explorations were attempted. These evasions were not dealt with as resistances. The therapist's failure to point them out as such prevented therapeutic progress. The patient's withdrawal was indication of withdrawal of cathexis and limited capacity. The therapist was passive and failed to handle adequately the therapeutic situation so that a good working relationship could not be established.

CASE 3.—An attractive, well-groomed woman of 27 came to the clinic with the statement, "I want to find out why my two husbands started running around. There is something the matter with me, my fault, something I do." Both husbands told her she made them feel miserable. Her mother was a dominating, carping woman who prophesied the patient would come to no good, and preached men were no good. Her father was strict, violently abusive, and a heavy drinker. The parents came to blows frequently. The patient feared her father. She married both men against her parents' wishes. At the time she came into treatment, the patient was separated from her second husband and lived with the parents. She quarreled bitterly with her mother. The patient was assigned to a female therapist.

The therapeutic interviews were often stormy,

the patient ventilating a great deal of hostility and aggression toward the therapist. At these times, the therapist felt so threatened that she actually feared physical attack by the patient. During some sessions, the patient would come in depressed, feeling guilty over her violent quarrels with her mother. She described her evening activities, which consisted of going to a night club with girl friends, being sexually provocative to the orchestra leader, but becoming highly insulted when the latter suggested a hotel room. Repeatedly, she would rave at the therapist for not giving her help or advice, that she was not getting anywhere because the therapist would not give her anything. This patient terminated after 12 treatments on the note that she wasn't getting any help.

Discussion.—Failure in this case must be ascribed to the therapist's inability to tolerate the patient's hostility. The patient was fixated at an oral level with marked aggression. The violent quarrels with her mother, followed by guilt and depression, meant orally incorporating the phallic mother. The patient recapitulated this behavior with the therapist. The patient's relations with men were primarily to castrate them and satisfy her narcissistic needs. She did not achieve genitality in her heterosexual relations. Her preference for girl friends is indicative of her homosexual strivings.

The therapist was aware of the transference relationship and of the meaning of the patient's frequently violent outbursts. However, she felt threatened by the patient's outspoken hostility so that her own anxiety made it impossible for her to deal with the transference feelings. The patient's remark to the therapist, "You won't give me any help," indicated an intuitive awareness of the therapist's need to isolate herself from the patient because of her anxiety.

CASE 4.—A 22-year-old single male was referred to the clinic for treatment of a convulsive disorder that the patient stated had been diagnosed as "functional in origin." He came to the clinic as the result of the father seeking help, the father's attitude being that the son would always be a burden to him. He complained that the parents were constantly telling him that he was ill, must take good care of his health, and that he could not do the things other boys did. He felt his seizures were due to his frustration over the efforts of the parents to keep him a child. At the time of intake, it was believed the patient was a case of conversion hysteria with poor prognosis. On several occasions, father and son came to physical blows, with the patient suffering a seizure whenever he became so enraged that he could have killed his father. Therapy was recommended on a trial basis, and a female

therapist was advised on the basis that the patient would not be able to tolerate the hostility he would feel for a man because of his relationship with his father.

The patient was seen twice weekly for 9 months and he missed very few appointments. Under a surface of pleasant cooperation, the patient concealed an attitude of hostility and respectful fear toward the therapist. From the beginning of treatment, the patient let off considerable steam regarding his parents. He was critical of his father's dictatorial, authoritative attitude toward the family. He felt that father constantly took the attitude that he contributed nothing to the home, yet he always paid the room rent, kept house, scrubbed floors, and prepared father's lunches. His mother at times told him she wished he had been a girl. On two occasions, the patient had a series of seizures, both episodes coinciding with the therapist preparing to leave on a vacation or to attend a meeting for a few days. Treatment terminated when there was some question as to whether the patient would go on an extended tour with a carnival. This would have given him a job and a living, but necessitated his leaving home. Although the patient seemed anxious to take the job, the therapist doubted the patient could make the move due to the jealousy and possessiveness he felt toward the parents. Unfortunately, the therapist left for a 2 weeks' vacation at this time and could not give the necessary support to the patient. As a consequence, he turned the job down and remained at home. He then had a series of "epileptic seizures" and became very aggressive toward his father. It was noted by the family that the attacks stopped as soon as he left home. Due to pressure from parents, he entered the County Hospital, expressing the hope on admission there that he would be able to have a real psychoanalysis. It was learned after treatment was terminated that the parents had been resentful and jealous of the therapist's influence over the patient, and that he had constantly used her as a threat to the parents.

Discussion.—Treatment in this case was unsuccessful for the following reasons: failure to deal with the transference situation adequately and ulterior motivation. The therapist identified with the patient's frustrations and rejection by his parents. Her countertransference feelings are indicated by her implication that the patient failed to leave home for a job because she was unfortunately not available to give him support. This led her into a situation more akin to rivalry for the patient, rather than handling the patient's feelings toward his parents. When the patient utilized the situation for ulterior purposes, she was unable to expose the way he was using her and the therapy to manipulate the family and the therapist. It was as if he said to his parents, 'See, I'm

no longer entirely dependent on you as I used to be; if you don't treat me right, the therapist will."

Basically it was the therapist's own need for love that prevented her from bringing out the patient's negative feelings, which would have facilitated his understanding of his relationship with his parents. Instead of encouraging frank expression of hostility and aggression on the part of the patient, the therapist, because of her identification, actually discouraged it.

SUMMARY

This study of failures in psychotherapy indicates that successful treatment of the psychoneuroses necessitates a consideration of the following points.

(1) *Motivation*.—An adequate understanding of the individual's motivation in coming into treatment requires that the intake worker be constantly alert to the ways in which the treatment situation, particularly in public clinics, may be used for ulterior motives and not because of genuine internal anxiety. We have illustrated this by citing cases where the patient comes to the clinic because psychiatric treatment was made a condition of remaining in school, or of being placed on parole. Patients may come into treatment because of other types of external pressure, such as the family, or the treatment situation may be too threatening to the wife or husband of a patient already in treatment and cause them to seek treatment. Unless the ulterior quality is dealt with promptly and sufficiently at the very onset of therapy, our experience indicates it will remain as a blanket of resistance over any significant material that may be obtained and prevent any progress in these areas. Ideally, inner anxiety must be the motivation; individuals with secondary motivation should be accepted only on a trial basis, and the first therapeutic problem should deal frankly with their motivation or lack of it. Only when this can be removed as resistance and inner anxiety mobilized, can it be considered that treatment has actually started. Placing these individuals on a trial basis prevents them from feeling secure in their deception and helps to mobilize the anxiety necessary for progress.

(2) *Dynamics*.—A prerequisite to any

successful treatment is a correct formulation of the psychodynamics of the disorder. The young girl in the second case illustrates the therapeutic confusion and failure due to incorrect evaluation of the psychopathology. If incorrect estimate of the ego strength is made, or if interpretations are made to persons with weak ego, treatment fails. Again this is best shown in treatment of the patient in Case 2. She suffered from a deep emotional disturbance of at least prepsychotic degree and did not have enough ego strength to form transference relationships.

(3) *Transference and Countertransference Problems*.—Regardless of the type of treatment, any therapeutic relationship contains transference and countertransference aspects. Any form of psychotherapy that ignores these elements can only be blind therapy. Although patients may benefit in therapeutic situations in which transference or countertransference elements are ignored or not perceived or both, it is only by awareness of these qualities that we can actually understand what is happening and what is not happening in therapy. Several of our cases cited illustrate how failure can be a direct result of ignorance of the transference or countertransference aspect of the relationship or of the inability to tolerate or work with these feelings. This is shown particularly well in the first and third cases. In the example of the veteran, the therapist's own attitude toward the army prevented adequate dealing with the patient's feelings as well as blinding him to the patient's deception. The third case illustrates therapeutic failure due to inability to cope with a patient's hostility.

The narcissistic need of the therapist to be loved frequently results in the therapist failing to encourage the patient to express hostility. Even more important is the therapist's inability to accept the libidinal aspect of the relationship because of his own anxiety.

CONCLUSION

This study of the psychodynamics of failure in treatment indicates that any successful therapy requires adequate understanding of motivation, accurate formulation of the psychopathology, and awareness of the transference and countertransference feelings in the course of treatment.

MENTAL DEFICIENCY AS A BASIC DISCIPLINE IN THE TRAINING OF A PSYCHIATRIST

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The field of mental deficiency is one with which the psychiatrist is not always familiar. By the time he has obtained his training in the psychoses and neuroses, explored psychosomatic medicine, and spread his wings towards the horizon of social psychiatry, too often the opportunity is neglected to gain a full experience in this particular field. Mental deficiency has been described as the Cinderella of psychiatry. The simile is apt, not merely in the opening scene, but also in the denouncement, as is soon apparent to those who tarry longer.

The number of defectives in the community has been variously estimated, and is probably about 2%. This is a considerable figure, and even if we refrain from adding the much larger borderline group the magnitude of the subject is obvious. Its significance to psychiatry is likewise becoming more apparent, and it is hardly a coincidence that in Britain candidates for the diploma in this specialty are being increasingly required to undergo a period of training in a mental deficiency institution.

By its very nature mental deficiency has firm connections with general medicine and genetics, whilst its ramifications extend into the kindred fields of education and sociology. It thus offers on the one hand a close bond with the basic disciplines of medicine, and at the same time through its wide contacts in the educational sphere it opens to the embryo psychiatrist a more sweeping vista and a broader conception of the field he is setting out to cultivate. To such a one, early in his career, mental deficiency is well placed to offer that contact with the ground that may yet serve to keep his feet firmly on the path as he gropes his way through the mist of psychological speculation.

To this end the mental deficiency institution can bring forward its wards, its school and training centres, and its clinics.

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In the wards will be found a wide array of cases whose intrinsic merit ranges from those almost purely medical to others capable of taxing the ingenuity of the experienced psychiatrist. It is sometimes forgotten that mental defect is associated with at least 70 different conditions, some exceedingly common, others excessively rare. Thus the student will encounter the common subcultural defective, representing the lower end of normal variation of the population, and the groups where amentia is associated with behaviour disorders, congenital syphilis, mongolism, endocrine dystrophies, skeletal, neuromuscular, and cutaneous conditions, and abnormalities of the special sense organs. In those with behavior disorders most institutions can offer cases of amentia due to brain-injury, epileptic amentia, and even frank psychosis such as infantile schizophrenia. Indeed the knowledge gained from this group alone can pave the way to the investigation of childhood psychoses, whilst detailed studies in the psychopathology of the brain-injured child can simplify later the understanding of the brain-injured adult. The skeletal group includes about 20 conditions, mostly rare, ranging from microcephaly to acrocephalosyndactyly, but it is in the neuromuscular group that close contact is made with neurology, and here the mental deficiency institution is often able to supplement the instruction in this subject. The plegic, striatal, and muscular syndromes comprising the neuromuscular group range from the congenital diplegias to the rare Pelizaeus-Merzbacher's disease, and these together with other rare conditions often make the institution a clinical treasury.

There is also considerable scope for biochemical studies, and one need only instance phenylpyruvic oligophrenia with its failure to metabolize phenylalanine. In like fashion the influence of genetics is abundantly clear in mental defect, but it is not so commonly realised that environmental factors also have a part to play, and that along this little-trodden path information can be culled which

may throw further light on personality structure and function.

It has been shown by Wechsler, Rappaport, and others that psychometrics, for long almost the monopoly of mental deficiency, can further the more exact diagnosis of the psychoses and neuroses, and it is probably true that of all branches of psychiatry mental deficiency is best equipped to give a fundamental training in mental testing.

It is increasingly recognised that the diagnosis of the higher grades of mental defect as well as of borderline defect is not the simple procedure it was once thought to be. In establishing a satisfactory diagnosis it may indeed be necessary to apply a series of tests, verbal and performance, social maturity, and perhaps, in some cases, projective techniques as well. A thorough training can thus be had in a comprehensive range of tests, such as the Terman-Merrill, Wechsler-Bellevue, Progressive Matrices, and others purely performance, whilst more specialised tests of memory can be applied, and some instruction obtained in achievement and vocational tests. Moreover, by a study of the test pattern obtained from the thorough examination of a case useful pointers can be gathered on the differential aspects of mental development, from concept formation to concentration, and on the selective impairment of these aspects. One need hardly cite the crippling effect of anxiety on the digit-span subtest of the Wechsler-Bellevue Scale, or the impairment and severe distortion revealed by Babcock's Learning Efficiency Test in suspected schizophrenia, in order to realise the advantage of a basic training in mental testing.

As mental defect may be complicated by psychopathy, psychosis, or psychoneurosis, some experience can be gained in such conditions. Although mild manic-depressive phases are not uncommon, a more useful introduction to the psychoses will be found in epilepsy and more especially in the schizophrenia that may be superimposed on feeble-mindedness. Indeed, schizophrenic features are probably those most prevalent in this group, including the interesting primitive catatonic psychosis occurring in mongols. Psychoneuroses occur more often in the dull and defective than in the normal population, and it is not long before the worker in this

field comes across anxiety states and hysteria, in the latter event not rarely encountering such gross manifestations as hysterical fits or psychogenic delirium. Again in the differential diagnosis further consideration must be given to psychopathy, schizophrenia simplex, as well as to a number of special disabilities ranging from impaired hearing to congenital word-blindness, which are capable of lowering the patient's reaction level.

The training and educational functions of the mental deficiency institution are almost a chapter in themselves. They range from the simplest of occupational therapy to undertaking preliminary training for industry, whilst the school work includes sensory training, speech therapy, and the methods applicable to brain-injured children.

Through its mentally-handicapped clinics the institution affords the trainee psychiatrist opportunity to see mental deficiency against the background of psychiatry as a whole, for to these clinics will be sent feeble-minded and borderline defectives of all types, whether in pure culture or complicated by psychosis, psychoneurosis, or psychopathy, to receive investigation from the diagnostic, forensic, or vocational aspects.

Finally, treatment in mental deficiency is receiving increasing attention. Apart from such simple procedures as the administration of thyroid or glutamic acid, more drastic treatments like prefrontal leucotomy are showing promise. The latter operation is of value in high-grade cases where psychopathy is a complication and where behaviour disorder generally is a marked feature, whilst recently McKhann has described the results of his operation for the revascularisation of the brain in chosen cases. Electroshock methods are likewise not without their uses, with indications similar to those in general psychiatry. Psychotherapy in mental deficiency has been largely neglected, yet it is apparent that the need for this does not vanish as the IQ drops below 70, and the increasing realisation that the defective has a personality as well as an intelligence quotient is likely to be accompanied by a development of this field. Indeed, from a survey of factors such as these it may well be that the time is not far distant when the accent will be on the dynamic rather than the static aspects of mental deficiency.

ACUTE PULMONARY CHANGES DURING INSULIN COMA THERAPY¹

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Lyons, N. J.

The use of insulin coma therapy following its introduction by Sakel(6) has definitely become established as one of the major methods of treatment of mental disorders during the past 20 years. Changes of a profound physiologic nature occur during the treatment, and naturally numerous complications have been reported. Of the deaths that occur during insulin shock therapy, Kinsey(5) found almost 25% were due to pulmonary complications. Among these are bacterial and aspiration pneumonia, lung abscess, patchy atelectasis, pulmonary edema, pulmonary congestion following cardiac decompensation, pulmonary embolism, and activation of quiescent tubercular infiltrations. In order to determine whether transient pulmonary complications were a common, but undetected occurrence during insulin coma therapy, Gross and Schaefer(4) reported the results of 18 unselected cases, who were roentgenographed immediately following termination of coma. None of these cases showed evidence of pulmonary edema or pulmonic consolidation, although one showed slight exaggeration of the pulmonary markings. It is the opinion of one of the authors (S. C.) that during the coma stage coarse rales are not infrequently heard over both lung fields particularly at the bases, without the patient displaying other danger signals, such as dyspnea, cyanosis, alteration of pulse rate, etc. These findings have been interpreted as periods of transient pulmonary edema that have cleared up by the time coma has been terminated.

CASE REPORT

Patient W. M. is a 21-year-old robust Negro admitted to Lyons Hospital on February 14, 1949.

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At the time of admission he was retarded, seclusive, mute, and in poor contact. He had been transferred to Lyons Hospital on the above date from the Walter Reed Hospital, where he had been admitted on November 30, 1948, with symptoms of hallucinatory experiences, persecutory delusions, and periods of mutism. The onset of his psychiatric condition had occurred about 2 months prior to admission to Walter Reed, while the patient was serving overseas. While at Walter Reed, he received electroshock therapy without marked change in his mental condition. At the time of admission to Lyons Hospital, the patient appeared in excellent physical condition and no abnormal physical or laboratory findings were noted, except for slight ECG changes, which were variable on succeeding examinations. These consisted of lowered T waves in leads 1 and 2 in one ECG and inverted T waves in leads 2 and 3 on another occasion. There were no clinical signs of heart disease and no past history of any cardiovascular or respiratory difficulties. X-ray of the lungs revealed no pathology. On May 31, 1949, at Lyons Hospital, he was started on a course of combined insulin coma and electroshock therapy and up to August 5, 1949, he had received 22 hours and 35 minutes of coma combined with 10 electroshock treatments. Treatment was given 5 days a week from Monday through Friday and consisted of intramuscular injections of insulin at 6:00 a.m. with coma ensuing usually 2½ to 3 hours later. Patient's coma status was maintained for one hour each time and was then terminated routinely either by the use of a solution of 40% glucose by nasal tube or by 25% intravenous glucose or a combination of both. Twice a week, the patient received electroconvulsive therapy, which would be administered within the first 10-minute period of coma. On these occasions the patient's coma would be terminated immediately upon the conclusion of the convulsive therapy by the intravenous method. Throughout the course of treatment, the patient's progress was good; although he remained rather shy, he was able to adjust on privilege status and was able to go home on weekends. His physical condition remained excellent and he had no physical complaints or intercurrent illnesses. On August 5, 1949, he received 250 units of insulin at 6:00 a.m., which dosage he had been receiving daily for several weeks. He developed a coma reaction in the usual fashion at 9:40 a.m. without any unusual occurrences. At 10:15 a.m., he suddenly stopped breathing, and became very cyanotic. On this particular day his treatment was not complicated by electroshock. Intravenous glucose 25% was immediately given and the patient reacted promptly, breathed well, and awoke from coma within 10 minutes. He received a total of 250 cc. of 25% glucose, corresponding to 62½ grams of glucose. Within a minute, however, after reach-

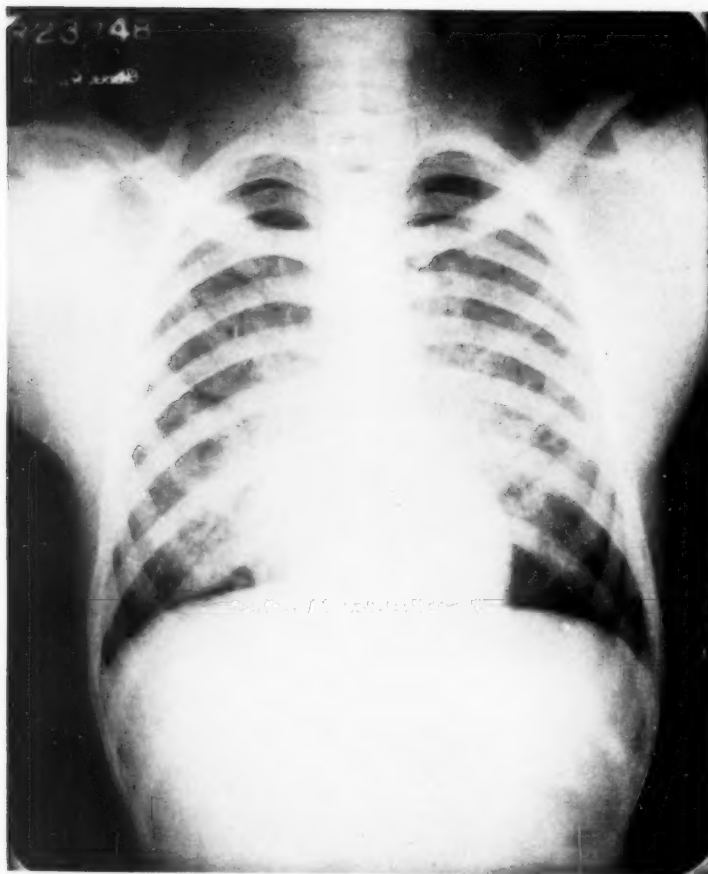


FIG. 1.—Disseminated areas of infiltration and pneumonitis in both lung fields.



FIG. 2.—Complete resolution of areas of infiltration 72 hours after onset of complication.

ing full consciousness, he started coughing softly. He refused oral glucose and it was necessary to pass a nasal tube for gavage as it was felt that he had not received enough intravenous glucose to neutralize completely all the insulin. The passage of the nasal tube was accomplished easily and without resistance. Immediate aspiration from the stomach, before the administration of the nasal tube glucose, revealed a small amount of frank blood, which is a frequent, but quite transitory, finding during insulin coma therapy, and he received one ounce of amphotel through the nasal tube, in addition to 250 grams of glucose. This procedure lasted about 15 minutes and the nasal tube was then immediately removed. The patient continued coughing slightly and was sent to X-ray, and an immediate medical consultation revealed "occasional rales in both bases." X-ray findings revealed "disseminated areas of infiltration and pneumonitis in both lung fields" (Fig. 1). The patient was transferred to the medical service and immediately started on penicillin routine and placed in an oxygen tent. Response to therapy was very rapid and his cough disappeared 48 hours later. At no time did the patient show an elevation of temperature. On August 8, 72 hours after the onset of the complication, an X-ray revealed complete resolution of the previously reported areas of infiltration of both lung fields (Fig. 2), and on August 11 the patient was returned to the insulin ward, feeling well and without any physical findings. He was not restarted on insulin coma therapy and about 3 weeks later absented himself from the hospital without permission. During that time, the patient had no complaints whatsoever.

DISCUSSION

The pathogenesis of the pulmonary complications of insulin shock therapy is not completely clear, and the subject of numerous theories. Gralnick(3) felt that pulmonary edema was not an uncommon complication, and among the mechanisms he discussed were hypoglycemia of the medulla, and hyperadrenalemia resulting in left heart failure. Farber(1) has induced pulmonary edema in rabbits by producing laryngeal paralysis and vagal nerve paralysis. Gottesfeldt (2) believed that hypoglycemia interfered with the physical chemical phenomenon of muscle contraction of the heart muscle itself and that this was the forerunner of pulmonary edema. Allergy has also been suggested as an important factor in pulmonary edema.

From a study of this case and the report of the literature it seems fairly certain that a single cause for all the pulmonary complications cannot be formulated. The

factors that, either individually or in combination, are responsible for these pulmonary complications are aspiration, direct or indirect interference with cardiac function, and disturbance of the function of the pulmonary and cardiac centers in the medulla. The role of allergy requires further investigation. The importance of understanding the mechanism in the formation of these pulmonary complications cannot be overemphasized, since the logical plan of treatment can only be based on these truly physiologic considerations. Treatment at Lyons follows a well-established line of procedure, based on an attempt to take care of all the possible mechanisms in the formation of these complications. The treatment consists, briefly, of bronchoscopic aspiration, oxygen tent therapy, administration of digitalis and coramine, as well as other drugs as indicated for supportive treatment to the heart, and the use of antibiotics. The routine use of this treatment schedule resulted in excellent rapid recovery of the case reported here, as well as of 3 previous cases seen at this hospital.

SUMMARY

A case of acute pulmonary complication to insulin therapy is described. The mechanism of its occurrence, as well as its treatment, is discussed.

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CHANGES IN THE BODY WEIGHT OF SCHIZOPHRENIC PATIENTS FOLLOWING PREFRONTAL LOBOTOMY¹

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AND

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INTRODUCTION

Marked increases in body weight following prefrontal lobotomy have been mentioned rather frequently in the literature. The Columbia-Greystone Associates (1), in attempting to study this phenomenon in greater detail, followed a series of 24 patients for 7 months after removal of frontal lobe cortex. A greater average gain in weight was found among these subjects than among a group of unoperated controls. The investigators were unable to correlate the weight change either with the type of operation or with the patient's response to therapy.

Freeman and Watts (2) attribute such postoperative increase in weight to uncontrolled eating associated with the development of excessive appetite. In view of the physiological relationship between the prefrontal cortex and the hypothalamus, however, one may speculate as to whether the weight gain reflects a postlobotomy change in metabolism, in addition to any alteration in food consumption. It is difficult to separate these two factors in patients who are discharged soon after operation to their homes, where control over their dietary habits may be lacking.

At Westminster Hospital for veterans, postlobotomy patients are maintained in hospital for an intensive rehabilitation program of at least 6 months' duration. This situation offers an excellent opportunity to study postoperative weight change in patients whose diet and activity are well controlled.

PROCEDURE

From a review of the hospital's weekly weight records, data were obtained for 32

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schizophrenic patients (28 males and 4 females), for a period of 6 months following operation. Four weight values were determined for each individual: (1) the preoperative weight—a mean of the last 3 weekly weights prior to lobotomy; (2) the early postoperative weight—a mean of the weights recorded on the 3rd, 4th, and 5th weeks following operation; (3) the 3-month postoperative weight; and (4) the 6-month postoperative weight. Values (3) and (4) were also obtained from a mean of 3 consecutive weekly weights. All weights were recorded in pounds.

Group mean weights for each specified time interval were then calculated from the individual means.

OBSERVATIONS

Analysis for the Entire Group

In Table 1 the group's preoperative mean weight and the mean weights at the 3 post-

TABLE 1
GROUP MEAN WEIGHTS BEFORE AND AFTER LOBOTOMY. NO SIGNIFICANT DIFFERENCES

	Preoperative	Early postoperative	3-month postoperative	6-month postoperative
Mean weight	149	149	149	153
S.E.M.	± 4.0	± 3.6	± 3.3	± 3.4

operative periods are shown, along with the standard error for each mean value. There were no significant differences between these means.

In addition to comparing the mean weights of the group, it is of importance to consider the individual changes in weight. Significant variations that were not apparent from the mean weight values might be revealed in this manner. For each patient, the difference was obtained between the preoperative weight and each of the 3 postoperative weight values. Group means were then calculated

from the individual weight changes at each postoperative period. These are shown in Table 2.

Taking the patients as a group, no significant change in weight was evident until the 6th postoperative month. At this time the group showed a small but significant weight increase. The mean weight change was twice as great as its standard error, indicating significance at the 5% level.

TABLE 2

GROUP MEAN CHANGES IN WEIGHT AFTER LOBOTOMY			
	Mean weight change	S.E.M.	Significance
Early post-operative	+ 0.3	(± 0.77)	.....
3-month post-operative	+ 0.2	(± 1.58)	.....
6-month post-operative	+ 4.0	(± 1.9)	$p < 0.05$

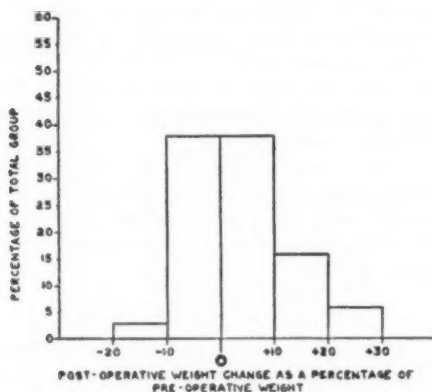


FIG. 1.—Distribution of weight changes at sixth postoperative month.

It is of interest to examine the distribution of the individual weight changes that comprised the group increase. By expressing each individual's alteration weight as a percentage of his preoperative weight, the degree of change can be best appreciated. This analysis is illustrated in Fig. 1. It will be seen that the majority (75%) of the patients experienced a weight change of less than 10% of their original preoperative weight. Of this majority, half of the patients showed a weight increase, while the other half showed a decrease in weight. It must be noted, how-

ever, that 22% of the patients experienced marked gains in weight (from 10%-30% of their preoperative weight), while only 3% of the patients showed comparable losses of weight. This breakdown reveals the true state of affairs underlying the observed group change in weight.

Weight Change and Postoperative Clinical Status

The question arises as to whether there is any relationship between the change in weight, and the clinical result of operation. At the 6th postoperative month, 19 members of the group were considered to have improved symptomatically, while 13 patients were regarded as relatively unimproved. The 6-month mean weight changes for the improved and unimproved groups are shown in Table 3.

TABLE 3

6-MONTH POSTOPERATIVE WEIGHT CHANGE In improved and unimproved patients

Group	Number	Group mean weight change	S.E.M.	Significance
Improved patients	19	+ 5	± 2.1	$p < 0.05$
Unimproved patients	13	+ 1	± 3.4	.....

The mean weight increase for the improved group was significant at the 5% level, whereas the mean weight change for the unimproved group did not represent a significant increase, because of the marked scatter about the mean value.

A more detailed comparison is derived from a study of the distribution of weight changes within each group. This analysis is presented in Fig. 2. In the unimproved group the distribution is skewed in the direction of weight loss, while in the improved group the distribution is more normal in configuration and centres around a moderate weight increase.

Relation of Marked Weight Gain to Pre-psychotic Weight

Special attention was paid to the small group of 7 patients who experienced large weight increases, i.e., over 10% of their pre-

operative weight. Did this increase return them to a normal weight or did it lead to obesity? If the former were the case, one could assume that the weight gain resulted from an improvement in appetite that permitted the consumption of an adequate diet. If, on the other hand, the weight gain led to

With the exception of 3 individuals, the postoperative gains in weights brought these patients closer to their ideal weight levels. Patients I., K., and W. exceeded their ideal weight by 5%, 11% and 7% respectively. Thus only patient K. could be said to have developed definite obesity following lobotomy.

Effect of Postoperative Retraining on Weight Change

The retraining program during the post-lobotomy period involved an intensive routine of educational and recreational pursuits, which was in decided contrast to the patient's preoperative activity. The degree to which this program may have contributed to change in weight can be judged by a study of the control series of 9 unoperated schizophrenics who were placed on the retraining program. Examination of their weight records revealed no significant change in weight at either the 6th week, 3rd month, or 6th month after commencement of retraining. It is to be noted that none of these patients showed any appreciable clinical benefit from the retraining program.

These observations strongly suggest that weight gain after lobotomy is associated primarily with relief of symptoms, and is not dependent upon the rehabilitative routine itself.

SUMMARY AND CONCLUSIONS

1. In this series of schizophrenic patients there was no consistent group change in weight prior to the 6th month after lobotomy.

2. At the 6th postoperative month the patients as a group showed a small but significant

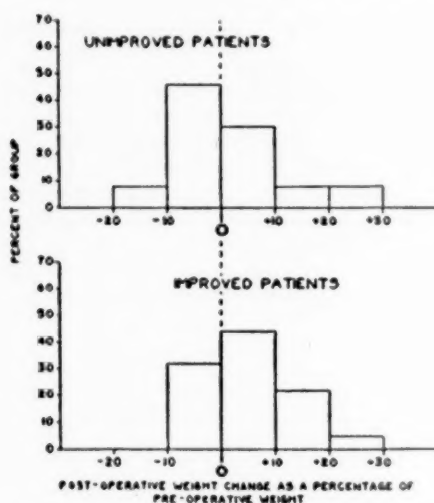


FIG. 2.—Distribution of weight changes at sixth postoperative month according to clinical status.

obesity, one would suspect that some metabolic change had followed the operation of lobotomy, since dietary excesses were not permitted. A comparison of the preoperative and postoperative weight levels of these patients with the average weight of persons of the same height and age will shed some light on this question. This comparison is set forth in Table 4.

TABLE 4

SEPARATE ANALYSES FOR SEVEN PATIENTS WITH MARKED GAIN

Patient	Sex	Age	Height	Preoperative weight	6-month postoperative weight	Ideal * weight
I.	M	26	5' 6"	125	149	142
K.	M	47	5' 8.5"	163	182	164
Mc.	M	30	5' 8"	137	153	152
M.	M	33	5' 10"	138	152	164
S.	M	33	5' 10"	127	155	164
W.	F	36	5' 0"	108	133	124
C.	M	34	5' 4"	124	136	138

* See reference 3.

cant weight increase. This arose principally from a marked weight gain on the part of a small group of patients.

3. The marked weight gains that occurred in certain patients postoperatively led, for the most part, to a resumption of a normal weight rather than to the development of obesity.

4. Separate analyses of the improved and unimproved groups indicated a trend toward weight gain in the improved patients, and a trend toward weight loss in the unimproved patients.

5. The postoperative retraining program did not appear to be responsible for the weight changes after lobotomy.

6. These findings indicate an increase in weight does not necessarily follow the operation of prefrontal lobotomy. It is suggested

that those patients who do gain weight on a controlled diet do so as a result of the improved appetite that accompanies amelioration of their mental symptoms. There is no indication from these observations that lobotomy produces any metabolic change leading to abnormal weight increase. The findings, instead, would confirm the prevalent belief that obesity following lobotomy results from uncontrolled eating during the postoperative period.

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NEUROPHRENIA¹

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Sometimes new terms reorient former concepts. Little's disease assumed new extensions when such expressions as spastic and birth injury came into use. The very obscurities of these expressions induced clearer professional thinking about paranatal intracranial lesions. Currently the term cerebral palsy has acquired wide usage to encompass the manifold consequences of early brain damage. But this term has literal disadvantages in that (1) it refers only to the neuromuscular consequences of central organic impairment, (2) it refers to only one portion of the intracranial anatomy involved, and (3) it does not restrict the time of onset or the etiology. (Although cerebral palsy has many forms and may occur at any time in the life history and from many causes, current use of this term by many orthopedists commonly refers implicitly to infantile intracranial pathology of paranatal etiology.)

There are many forms of developmental central organic impairment in addition to birth lesions. Among these may be mentioned embryonic and foetal anomalies, postnatal traumata, infantile and juvenile hyperthermias, increased intracranial pressures, toxic infections, and so on through a long list that requires more explicit categorical specification than has heretofore been systematically set forth in relation to all the personality sequelae.

All these neurological involvements are symptomatically apparent in behavior manifestations that, taken together, constitute a pattern approximating a symptom-complex although perhaps not a syndrome or clinical entity.

The purpose of this paper is to enumerate some of the behavior manifestations of early brain damage and to suggest a research approach to their systematic evaluation. To this end it is helpful to incorporate the presumptive pathologic antecedents with the per-

sonality consequences under a single concept and to identify this concept by a new term. For this purpose we have been using the term *neurophrenia* to mean the behavior symptoms ensuing from central nervous system impairment.³ The prefix refers to central organic involvements that, by restricted definition, occur during the developmental years (the embryonic, paranatal, infantile, and juvenile periods prior to developmental maturity); the suffix implies the behavioral consequences of such involvements (the neuromuscular, sensory, intellectual, emotional, and volitional symptomatology).

"Neurophrenia" has the merit of supplying a professionally technical, descriptive term to cover a clinically definite group of behavioral symptoms. The term is etymologically literal; the prefix alludes to neural elements, and, by extension, to the central nervous system, while the suffix refers to the mind and, by extension, to total personality or behavior. Since all behavior is neurologically derived, the term has little meaning for the normal person. Therefore, it implies abnormal behavior associated with neuropathology.

Literally, the term has no age limitations. Neural impairments resulting in behavior impairments occur at all ages. But the sequelae vary with the antecedents in such variety as to leave this term meaningless if applied to all age levels and all impairments. Since it is permissible to give restricted meaning to a new term, *neurophrenia* as here conceived is limited in time to the maturational (pre-adult) years from conception to late adolescence. Actually the term is most helpful in relation to the infantile and early juvenile years, say about the first 5 years of postconceptional life. These are, from present observations, the years during which the neuro-

¹ Presented at the annual meeting of the American Academy for Cerebral Palsy, Chicago, Ill., October 21, 1950.

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³ The term itself and the plan for a long-term program of coordinated medical, psychological, social, and educational research, utilizing the clinical and service facilities of Devereux Schools, were developed in collaboration with Helena T. Devereux, Director of Devereux Schools.

logical damage and the behavioral sequelæ are most apparent, since there seems to be some degree of repair or substitution with advancing years, especially under well-advised measures of medical, educational, and social therapy.

By further restriction of definition, neurophrenia is held to exclude such conditions as classical cerebral palsy and irremediable mental deficiency, whether endogenous or oxogenous, since these conditions are already well understood and adequately categorized. We propose the new term for a total behavior picture where central neurological impairment restricts or distorts the optimum expression of native potential and produces early functional inadequacies or disturbances of behavior that are appreciably remediable under favorable regimen. The *nature* of the impairment offers hope for substantial maturational amelioration or recovery.

Essentially, then, "neurophrenia" is suggested as a substitute term for "brain damage." The latter, or equivalent expressions, has been used recently by Strauss, Werner, Goldstein, and others in the same framework as we employ for neurophrenia. Brain damage literally refers to the neurological antecedents but is actually used in describing the behavior consequences; neurophrenia incorporates both.

It is not feasible at this time to delineate either the neurological antecedents or the behavior sequelæ with definitive exactness. This must be left to further experience, observation, and research. It is possible, however, to indicate some of the behavior symptoms that strongly suggest the probability of central damage. It also is possible to do this in such a manner that various presumptive pathologies may be hypothesized. The work is too recent and the data too varied to permit other than clinical speculation at the present time. However, sufficient experience has been had to warrant a new orientation.

It is proposed that the term neurophrenia affords such an orientation, supplying as it does both a term and a concept under which previous work may be reassembled and new lines of inquiry effectively pursued. It is anticipated that such a generic concept, which has been achieved by induction from many

sources of material, may subsequently be reduced to subcategories, and perhaps eventually to clinical entities as the evidence becomes more clearly apparent.

Much of the symptomatology is derived from sophisticated interview, intuitive observation, and laboratory procedures based on clinical experience with partially identified cases. The following summary, therefore, is neither orderly nor inclusive, but represents only the author's present awareness of preliminary indications. No attempt is made here to incorporate a systematic review of the literature but rather somewhat informally to pool borrowings from that literature supplemented by personal experience and the generous sharing of experiences on the part of colleagues similarly concerned. This paper, therefore, merely reformulates the problem under a new term as a renewed impetus to a long-term program of research.

Among the more immediate observations of behavior suggestive of brain damage are disturbances of neuromuscular coordination. For the moment, these may be viewed psychologically rather than orthopedically at the level of behavior adequacy. The patient's locomotor balance may be appraised by use of the Heath rails, and his manipulation by the Van der Lugt manual ability scale. Or the patient may be examined in both areas by means of the 6 categories of the Oseretsky scale of motor proficiency. Neuromuscular impairment, other than typical cerebral palsy, is sometimes thus revealed that is not otherwise immediately apparent, and that may supplement conventional orthopedic evaluation. Such observations often constitute an initial clue to a presumption of central damage.

Another arresting symptom is noted in the area of receptive experience. This most commonly includes visual and auditory handicaps and weakness of language facility. We are not referring here to deficits in sensory acuity but rather in sensory perception. We have seen, for example, a patient with apparently no impairment in auditory acuity, but almost total lack of auditory perception; that is, the sounds heard had acquired so little meaning that they were not responded to as a means of auditory contact with the world of experience. The clinical evaluation of audi-

tory perception is extremely difficult, whereas the appraisal of visual perception is presently possible through a variety of devices. Likewise, the developmental disturbances of language are apparent in various forms and degrees of receptive aphasia, which are susceptible to measurement by relatively well-known procedures.

Disturbances in the receptive avenues are accompanied by disturbances of expressive performance. Combining these we speak of the "barriers to expression" as including both the receiving and the reacting phases of behavior. Obviously, the expressive aspect of experience depends upon receptive integrity. Therefore, we may infer receptive disturbance from the expressive symptoms because of the usual reciprocation, the manner and degree of plausible interaction to be resolved from the total symptomatology.

These impediments in receptive and expressive experience suggest a likelihood of behavior problems in the more limited sense of conduct. We would anticipate that emotional disturbance might accompany the frustrations and irritabilities naturally ensuing from the conflict between spontaneous aspiration and restricted capacity for performance. This appears indeed to be the case, for our observations reveal these patients to be hyperactive, destructive, irritable, resistive, and autistic. Many of them are socially incommunicado. They appear to be repressed, suppressed, or even depressed. Their struggle to overcome the barriers imposed between them and their social world by their organic pathology takes many forms of aggression, hostility, or withdrawal. The consequent disorders in the emotional and volitional spheres are typically an integral part of the total symptomatology. Their competent evaluation requires a marked degree of insight and freedom from bias in order to avoid confusion with the emotional indications from conditioned experience, situational maladjustment, and psychiatric involvements.

In such circumstances the evaluation of intelligence level is obviously hazardous. Sophisticated experience reveals a striking disparity between overt performances and presumptive capacities. The expressive measurements obtained from conventional psycho-

metric and projective devices may be grossly misleading if interpreted as indications of untrammelled capacity. But since the usual measurement of capacity is by way of expressive performance, the more accurate evaluation of capacity must be left either to intuitive observation or to highly sensitive interpretation of conflicting evidence in the area of performance. Here the observer notes momentary flashes of capacity as indicated by intermittent language use, by the inquisitive and exploratory attitudes of the patient, by his manipulation of the material environment and the people within that environment. From this point of view we see the behavior confusion aggravated by the ambivalences, punitive attitudes, and rejections that the bewildered adult imposes upon the misunderstood, insecure, anxious child. Such appraisal of intellectual level is further complicated by the difficulties of speech and language, impaired perception, and restricted motor response.

Hence it is necessary for the clinical psychologist to be alert to the limitations in all psychological areas, including intermittent attention, variable concentration, confused impressions, crystallized learning, vagaries of memory, developmental language deficiency, and so on.

Still another area of evaluation is the measurement of laterality in relation to cerebral dominance. One author proposes as many as 7 classifications of laterality, and offers 30 test items for the delineation of "sidedness." Laterality confusion has, of course, a possible relation to speech, reading, and disturbed behavior.

An additional consideration is the individually characteristic rhythm pattern. Some specialists in speech, language, and reading consider this a primary necessity to corrective instruction. This may be measured by means of the variable metronome. The disparity between the patient's individual rhythm and that which is most common to the social group or other individuals with whom he has his social experiences is sometimes a major key to clinical reeducation.

Our present clinical experience of neurophrenia is still at the exploratory level and

requires a minimum of bias in symptom interpretation and therapeutic management. At Devereux Schools we are presently committed to a coordinated program of research-oriented education and therapy in those areas that are for us at present most practicable. We are fortunate in having broad coverage in orthopedic and neurological consultation as well as in other avenues of medical resources such as pediatrics, psychosomatic medicine, endocrinology, and other supportive areas. Our resident medical staff of psychiatrists and psychiatrically oriented physicians is supported by a resident staff of psychologists specifically concerned with these problems and immediately seeking their effective resolution. This good fortune is

increased by unit residential staffs skilled in the socialized aspects of home life, and a professional educational staff that includes such expressive avenues as art, drama, speech, language, reading, and other expressive and remedial instruction.

Devoted as we are to a program of the most effective resolution of the disparity between social expression and organic potential, we are accepting the research challenge that confronts us in that group of our students who are in the category of neurophrenia. Perhaps the problem may be expressed in terms of scientific sentiment: "Give us eyes to see beneath the appearances, that we may discern the hidden portents."

HEREDITY AND MENTAL TRAITS¹

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The point of reference in human genetics is the gene, but geneticists would discourage the popular practice of relating a specific disease or trait to the isolated action of a particular gene. Rather, it is emphasized that perhaps the entire complex of genes is involved and that a trait or character is merely associated with the gene that exerts the most marked effect and that its expression is dependent upon the peculiar environmental influences in which the gene happens to be active. Accordingly the final expression of a trait or character is the result of both genetic and environmental differences.

The subtlety of the interrelationship and interdependence between the effects of genes and the influences of environment is illustrated in the disease entity *mongolism* for which genetic evidence is slowly accumulating. The interesting feature of this disease is that the genetic complex is expressed in an intrauterine environment peculiar to older mothers. Whereas the average age of mothers for all births is about 29 years, the mean age for mothers of mongol children is about 37 years. An accurate statement of the nature-nurture problem in a discussion of this syndrome makes unnecessary the use of such terms as "endogenous" and "exogenous," which imply a dichotomy that is non-existent.

Medical genetics today favors the view that mental defect, schizophrenia, the affective psychoses, and epilepsy, are probably separate problems etiologically. This is radically different from the assumption, which is still commonly held, that an inadequate hereditary constitution is one which is "tainted," "poor," or "weak" and that this may manifest itself in an alcoholic father, a psychotic mother, or dysrhythmia in a suspected epileptic first cousin. The "tainting" germ-plasm hypothesis is tempting and "natural." Thus one commonly reads of "neuropathic diathesis" in a family with

relatives with such diverse problems as psychosis, neurosis, alcoholism, pauperism, and perhaps even bad manners. Such cases are usually reported in families from depressed social, economic and cultural levels where one would expect to find, on environmental grounds alone, a concentration of such diverse psychopathic features in isolated families, particularly since people with varied nervous and emotional illnesses are more likely to intermarry. Also, it would make for greater clarity to use the word "genetic" in place of the vague term "constitutional," when the point of reference is the gene. Thus, those who employ the diagnostic category "constitutional psychopathic personality" would be doing so at the risk of ascribing this condition to genetic causes alone, which is hardly what they mean to do.

The impression is widespread that the action of the gene stops quite abruptly at birth. Nothing could be more misleading. The biochemical activity of the gene goes on throughout the life of the individual; in a sense, such activity is synonymous with life. Furthermore, a gene usually affects many parts of the body and influences the action of still other genes. This is far removed from the rigid Mendelian inheritance of several decades ago. Genic action is a dynamic day-to-day biochemical force molding the development and activity of the human personality. Otherwise how can one explain similarities in physical, intellectual, and, to a lesser degree, emotional growth curves? While holding to this view it is important, nevertheless, to emphasize that genes account for potentialities alone and not the end product. If the mode of inheritance of emotional behavior is found to be similar in nature to general intelligence, the implication for psychiatry would be that we inherit genes for potentiality of human activities, the end product of human behavior being environmentally determined.

In regard to the inheritance of human intelligence present evidence suggests that the

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average intellectual capacity of brothers and sisters in a family tends to approach a mid-parent average. This would mean that children tend to inherit potentials for intelligence that approach the average potentials for their parents, in much the same way as obtains for height and weight. Whether or not such potentials are realized depends upon the physical and emotional health of the child and the opportunities that are available for the potentialities to develop. And so it may very well be in the matter of human emotional potentials. Future research may yet discover that emotional inheritance implies the inheritance of general energy and that the variation in energy potential could describe a normal curve of distribution similar to that obtained for human intelligence. The manner in which this emotional potential is spent, whether or not it is wasted in neurotic and psychotic modes of conflict, could depend upon the subtle influences of environmental pressures.

In our present civilization mental illness is all too common, showing little respect for differences in social or economic strata and levels of intelligence. Because certain varieties of mental illness tend to occur with greater frequency among close relatives of affected persons than is true for relatives of normal, we have grown accustomed to ascribing a genetic etiology to schizophrenia and the affective illnesses. Frequently, medical examiners even go so far as to suggest a specificity in mode of inheritance. The fact that such statements are very often tempered with extreme caution, and that it is emphasized that the genetic factor shows considerable variation, is usually not sufficient to keep close relatives from feeling convinced that a number of the offsprings of affected parents are destined to become mentally ill, on biological grounds alone and almost irrespective of environmental stress.

Those of us who directly share the responsibility for the care of the mentally ill have a singular responsibility to the close relatives of patients placed in our care in advising them about their chances of inheritance of such defect. We should accept with considerable caution any definitive advice, since medical genetics today knows nothing

specific about the manner of inheritance of schizophrenia or the affective psychoses. The past few decades have seen essentially negligible research in this field of medicine despite our wish to believe otherwise. Too many variables are involved, in a type of study that requires a background in medicine, genetics, and often statistics, a combination of training that has been rare. Nor has there been adequate financial incentive. The result is that many studies have been conducted by genuinely motivated and unselfish people in their spare moments as secondary interests. It is therefore not surprising that their conclusions have been inconclusive and in a few instances perhaps misleading.

A study that is widely known and is responsible for a good deal of present-day opinion about the genetics of schizophrenia is the work of Dr. Franz J. Kallmann, present head of the department of medical genetics at the New York State Psychiatric Institute at Columbia University. His findings, based upon a European sampling, were published in 1938 in a book entitled "The Genetics of Schizophrenia." He examined the case records of 1,087 institutionalized schizophrenics admitted to the Herzberge Hospital in Berlin from 1893 through 1902. He sought information, from these records, not only about the patient, but about the emotional status of the parents and relatives. He arrived at his own diagnosis, and this did not always agree with that made by earlier psychiatrists. With these case records at hand he determined the number of cases in which the schizophrenic had brothers and sisters who were also schizophrenic; the number of parents of these patients who were so affected; and the number of offsprings of these patients who were known to be schizophrenic. He found that the occurrence of schizophrenia among relatives of those affected was considerably higher than the normal expectancy in the general population. He concluded:

As to the genetic interpretation of the hereditary transmission of schizophrenia, it cannot yet be fully established whether the trait is inherited as a single-recessive Mendelian character or on a more complicated basis. We may only say with certainty that all our genetic results point to the recessivity of this predisposition and exclude the possibility of a transmission depending on two or more genes.

Employing twin methodology he has more recently emphasized this viewpoint. In a paper presented in September, 1950, at the International Congress of Psychiatry he stated:

With respect to the recessive unit factor for schizophrenia it is safe to assume . . . that the variations in its clinical appearance range from the mildest to the most destructive forms of the disease. Since the constitutional inability to resist the development, or to counteract the progression, of a schizophrenic psychosis shows a wide range of graded differences, deficient resistance is believed by us to be determined by a nonspecific and certainly multifactorial type of secondary genetic mechanism, which is measurable by the capacity for mobilizing effective *mesodermal* defense reactions. . . .

The balance of evidence concerning the mode of inheritance operating in the two major types of psychosis points to *recessiveness* with respect to the main genotype of *schizophrenia*, and to *irregular* dominance with respect to that of *manic-depressive psychosis*.

A recent critical review² of Kallmann's methodology was summarized as follows:

After consideration of the various questions which can be raised with regard to Kallmann's methodology—his diagnostic procedure, statistical treatment of data, sampling procedure, uncontrolled variables—the present writer is of the opinion that the genetics of schizophrenia is still an open question. It should be emphasized that the present writer in no way wishes to minimize the contribution of hereditary factors in the etiology of schizophrenia, however unknown the specific nature of these hereditary factors may be. The Kallmann investigation, however, supplies no reliable information for assessing the genetic basis of schizophrenia.

Whether or not one agrees with Dr. Kallmann, there is no denying that he has amassed a wealth of data. If there are those who, like ourselves, would be tempted to disagree with him, we have no real evidence of our own to support our intuitive judgments. Nevertheless, we could rightly point out that a singular shortcoming in current investigations may prove to be failure to emphasize that a growing child, under the unfavorable influences of living with emotionally unstable parents, is likely to be conditioned along abnormal patterns of behavior and is subject to constant emotional traumas. Nor do the twin data that have thus far been

presented alter significantly this basic criticism.

To quote again from Dr. Kallmann's paper:

Professionally it is inadequate to project individual over-reaction to "congenital" or other frustrations into the motives of a nearly omnipotential belief that the mere promotion of insight into the psychodynamic mechanisms of serious behavior disorders will be sufficient to cure every form of maladjustment to human culture. No medical man should ever be encouraged to pay lip service to the popular notion, easily abused by quacks and demagogues, that it is the human environment, which can be controlled at will and, if necessary, can be reversed to such an extent as to bring all the environmentally conditioned disturbances within the range of future curability. Very little factual evidence has as yet been produced to justify the somewhat wishful and potentially dangerous idea that the environmental part in the intricate pathogenesis of a psychosis may soon lend itself to a more effective therapeutic control than those functional deficiencies in adaptation determined by genetic elements.

While granting Dr. Kallmann his evidence we would, however, disagree with his uncompromising attitude toward those who, though lacking evidence, still feel skeptical about taking a deterministic attitude toward mental breakdown. We should like to reaffirm our belief in a far more hopeful and optimistic approach to this problem. In studying many records of mental patients one cannot help being impressed with the impact of environmental stress in the etiology of mental illness, especially during the formative years.

One aspect of abnormal human behavior to which medical genetics has made singular contributions is in the allied field of mental defect. In this field environmental influences have played small or negligible roles, and this fact has considerably simplified the problem. Two varieties of mental defect will serve as illustrations. In both, the gene causes profound disturbances in body metabolism, associated with severe trauma to the central nervous system.

Gargoylism, a severe congenital abnormality of development, is a clinical syndrome characterized by abnormalities of the osseous system (skull, sella turcica, spine, and limbs), congenital clouding of the cornea, abdominal distention with enlargement of the liver and spleen, and the presence of mental deficiency

² Pastore, Nicholas. Special Review: The Genetics of Schizophrenia. *Psychol. Bull.*, 46: 285, 1949.

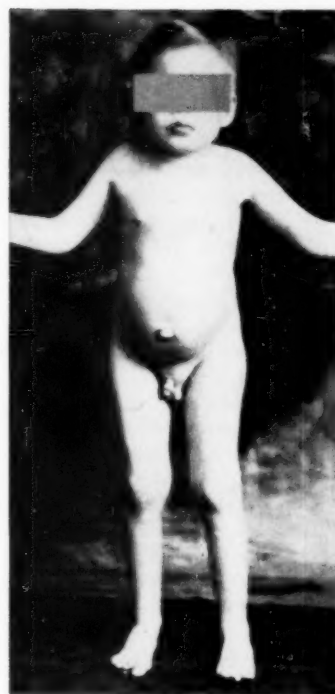


FIG. 1.—Case of gargoylism.



FIG. 2.—Phenylketonuria. Affected brother and sister.



usually of rather low level. The most typical feature is the grotesque facial appearance, which in itself may be diagnostic. Genetic studies suggest that a gene is responsible for causing the breakdown in body metabolism. This in turn is associated with severe trauma to the central nervous system. The abnormal gene is recessive in its action. This means that the parents are carriers and one would anticipate that, by chance, one-fourth of the offspring would be affected. The effect of the disruption to the central nervous system is very marked, causing mental deficiency of very low level; whether there is emotional disturbance also is practically impossible to learn since these cases are too retarded intellectually to make known abnormal thought content or disruption in emotional control.

A similar genetic causation is involved in a condition known as *phenylketonuria* (or phenylpyruvic oligophrenia). In 1934 the Norwegian biochemist Föllowing discovered that 1% to 2% of idiots and imbeciles excrete phenylpyruvic acid in the urine. This abnormal metabolite is a product of the incomplete oxidation of the protein constituent phenylalanine and is invariably associated with severe mental defect. Subsequent studies have shown that this condition is due to the action of a recessive gene. The parents are carriers and one-fourth of the offspring are so affected. Body metabolism is apparently so sensitive a biochemical process that one small slip in the long chain of events is enough to cause severe damage to the central nervous system. The degree of defect is too great to make possible an assessment of accompanying emotional changes.

In the far distant future we may discover pathological genes in man responsible for abnormal thinking and emotional breakdown. But for the present and foreseeable future, we cannot allow success in such studies as have been discussed here to engender a will-to-believe in a direct relationship between genes and aspects of abnormal emotional behavior. In cases of mental defect such as *gargoylism* and *phenylketonuria* the mental phenomena are side products, so to speak, of breakdown in biochemical activity, in a highly complex chain of events. Emotional breakdown usually appears later in life, during

formative periods in development subject to subtle environmental influences about which we still know so little. One suspects that our desire to relate emotional illness to specific action of genes could easily reflect guilt feelings we may have about our own inadequate management of the growing child during the formative years.

We are often tempted to speak of biological predisposition to emotional illness in the same manner, for example, as biological predisposition to tuberculosis. We may be in error in our inference of organ susceptibility in respect to the central nervous system and psychotic breakdown. However, it may be in order to ascribe to genes predisposition in terms of inheritance of low energy potential. Since emotional breakdown is so intimately related to traumatic environmental pressures, it would seem reasonable to study these influences with great care. Yet we lack adequate data on normal emotional development and the subtle environmental pressures associated with emotional breakdown.

From the point of view of their detection the most elusive of environmental influences are those that occur during pregnancy. An examination of such variables as size of family, place in sibship, and age of the mother at the time of the birth of the patient, may be helpful in seeking clues to the influences of these subtle agents. Perhaps an example or two from the field of mental defect will help clarify this point. The data presented here were gathered from a population of mental defectives in Ohio.

A characteristic feature that is frequently noted of a variety of congenital malformations including *mongolism*, *anencephaly*, *hydrocephalus*, and less frequently, *spina bifida*, is that the age of the mother is a significant contributing factor. Table 1 presents data on the maternal age at birth of various types of mental defect. There is considerable variation; the mean age of mothers in cases of *mongolism* is significantly higher than the age for all mothers.

An analysis of the place in the sibship of cases of cerebral birth trauma is presented in Table 2. The first-born child is frequently regarded as more liable to birth injury. In the present series there is an excess of first-

TABLE 1
MATERIAL AGE AT BIRTH OF PATIENT FOR
DIFFERENT CLINICAL VARIETIES OF
MENTAL DEFECT

Mental defect associated with	Number of cases	Mean maternal age
Mongolism	27	35.14
Skeletal defect	18	32.17
Emotional illness	17	30.33
* Miscellaneous illnesses	17	30.13
Cerebral inflammation	8	29.50
Undifferentiated	56	28.44
Glandular defect	9	28.44
Acclinical	139	28.26
Cerebral trauma at birth..	17	26.54
Congenital syphilis	8	25.86
Diplegia of prenatal origin.	7	25.43
All cases		29.20

* Includes cases of mental defect associated with deaf-mutism, toxemia of pregnancy, anhidrotic ectodermal dysplasia, pseudohypertrophic muscular dystrophy, Hirschsprung's disease, epilepsy, Friedreich's ataxia, gargoylism, and eye diseases.

born among patients with a reliable history of cerebral trauma. Employing a method suggested by Greenwood and Yule, and comparing the observed number of first-born with the rest of the ordinal positions, chi-square is 3.56 and P for one degree of freedom is 0.075. While this difference is short of significance it is sufficiently large to suggest that with the accumulation of additional data primogeniture may yet be shown to be a statistically significant factor in this problem.

Table 3 examines the ordinal places of idiots, excluding mongols. The result suggests that idiots are not more frequently first-born than would be expected by chance. A similar analysis regarding 53 cases with undifferentiated neurological histories is presented in Table 4. This suggests an excess of patients born later in the sibship, an effect that is more pronounced when all varieties

TABLE 2
PLACE IN SIBSHIP OF CASES OF CEREBRAL BIRTH TRAUMA

Order of birth	Size of sibship												Observed total	Expected total
	1	2	3	4	5	6	7	8	9	10	11	12		
1	1	5	2	1	—	—	1	—	—	—	—	—	10	6.16
2	—	—	1	—	—	—	—	—	—	—	—	—	1	5.16
3	—	—	—	1	1	—	—	—	—	—	—	—	2	2.66
4	—	—	—	—	—	—	1	—	—	—	—	—	1	1.33
5	—	—	—	—	—	1	—	—	—	—	—	—	1	0.83
6	—	—	—	—	—	—	—	—	—	—	—	—	0	0.83
7	—	—	—	—	—	—	1	—	—	—	—	1	2	0.66
8	—	—	—	—	—	—	—	1	—	—	—	—	1	0.21
9	—	—	—	—	—	—	—	—	—	—	—	—	0	0.08
10	—	—	—	—	—	—	—	—	—	—	—	—	0	0.08
11	—	—	—	—	—	—	—	—	—	—	—	—	0	0.08
12	—	—	—	—	—	—	—	—	—	—	—	—	0	0.08
Total	1	5	4	2	0	1	3	1	0	0	0	1		

TABLE 3
PLACE IN SIBSHIP OF IDIOTS (EXCLUDING MONGOLS)

Order of birth	Size of sibship											Observed total	Expected total
	1	2	3	4	5	6	7	8	9	10	11-14		
1	4	8	1	3	3	—	1	—	—	—	—	20	20.12
2	—	—	5	3	—	2	—	—	—	—	—	15	17.12
3	—	—	—	6	1	2	2	—	—	—	—	11	10.62
4	—	—	—	—	4	1	—	—	—	—	—	5	6.62
5	—	—	—	—	—	1	1	—	—	—	—	2	3.87
6	—	—	—	—	—	—	1	1	1	—	—	3	2.47
7	—	—	—	—	—	—	—	1	1	—	2	5	1.64
8	—	—	—	—	—	—	—	—	2	—	1	3	1.21
9	—	—	—	—	—	—	—	—	—	—	1	1	0.71
10	—	—	—	—	—	—	—	—	—	—	—	0	0.60
11-14	—	—	—	—	—	—	—	—	—	—	2	2	0.95
Total	4	13	12	11	7	5	3	4	1	1	6		

TABLE 4
PLACE IN SIBSHIP OF CASES OF UNDIFFERENTIATED NEUROLOGICAL DISEASE

Order of birth	Size of sibship										Observed total	Expected total
	1	2	3	4	5	6	7	8	9	10		
1	4	5	1	3	2	—	—	—	1	—	16	18.46
2		10	1	1	2	2	—	—	—	—	16	14.46
3			2	2	1	1	—	—	—	—	6	6.96
4				3	—	—	—	—	—	1	4	5.63
5					2	2	—	—	—	—	4	3.38
6						2	—	—	—	1	3	1.98
7							2	—	—	—	2	0.81
8								—	—	—	0	0.52
9									1	—	1	0.52
10										1	1	0.30
Total	4	15	4	9	7	7	2	0	2	3		

TABLE 5
ANALYSIS OF PLACE IN SIBSHIP OF 332 CASES OF MENTAL DEFECT

Order of birth	Size of sibship												Observed total	Expected total
	1	2	3	4	5	6	7	8	9	10	11	12-16		
1	14	20	16	14	13	3	6	1	2	—	—	—	89	91.32
2		28	18	8	6	3	4	3	—	1	1	—	72	77.32
3			18	14	8	4	2	—	—	—	—	—	46	53.32
4				8	4	3	2	1	2	1	—	1	22	35.99
5					12	7	5	—	2	2	1	—	29	24.99
6						6	1	6	3	2	—	—	18	16.39
7							10	4	1	3	—	4	22	12.06
8								5	4	2	1	2	14	7.77
9									4	2	1	2	9	5.27
10										4	—	—	4	3.27
11											1	3	4	1.57
12-16												3	3	2.70
Total	14	48	52	44	43	26	30	20	18	17	5	15		

TABLE 6
PLACE IN SIBSHIP OF CASES OF MONGOLISM

Order of birth	Size of sibship												Observed total	Expected total
	1	2	3	4	5	6	7	8	9	10	11	12-13		
1	3	—	1	1	—	—	—	—	—	—	—	—	5	9.17
2		4	—	1	—	—	—	—	—	—	—	—	5	6.17
3			3	1	—	1	—	—	—	—	—	—	5	4.17
4				3	1	—	—	—	—	—	—	—	4	2.84
5					—	—	—	—	—	—	—	—	0	1.34
6						—	1	—	—	—	—	—	1	1.14
7							3	1	—	—	—	—	4	0.97
8								—	—	—	—	—	0	0.40
9									—	—	—	—	0	0.28
10										2	—	—	2	0.28
11											—	—	0	0.08
12-13												1	1	0.16
Total	3	4	4	6	1	1	4	1	0	2	0	1		

of mental defect are examined together (Table 5) and is especially true in cases of mongolism (Table 6).

In conclusion, it is hoped that similar techniques may be applied in investigations of

environmental influences in emotional illness and that future research may yet separate fact from fancy in the field of emotional defect as is slowly being done in research in intellectual defect.

CLINICAL NOTES

A NOTE ON THE VALUE OF THE PSYCHIATRIC SOCIAL WORKER'S INTAKE INTERVIEW IN A MEDICAL STUDENT TEACHING PROGRAM

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This material comes out of the first two years in which the psychiatric outpatient clinic of the Hospital of the University of Pennsylvania was used as a teaching clinic for fourth year medical students. During the first year, patients were assigned routinely from all sources without an intake interview. In the second year, an intake interview was conducted by the psychiatric social worker for all patients assigned to students.

The intake interview was to provide (1) an understanding and clarification of the problem as presented by the patient, (2) an evaluation of the patient's readiness for psychiatric treatment, (3) an interpretation of the clinic as a psychiatric clinic, (4) in a general way a description of the kind of treatment given, (5) a brief picture of the current social situation with interpretation of the fee plan and the setting of the fee.

On the basis of the symptom picture provided by this interview, the psychiatrist in charge and the psychiatric social worker selected the cases for assignment to the students, attempting to choose those that would afford a cross section of psychosomatic and neurotic problems, especially where there was anxiety or clear-cut conversion present. It was hoped to avoid wherever possible cases of character neurosis, as too difficult to treat in this program, and psychotic patients, since our students' third year clerkship provides experience with such cases.

It was found that selection on the basis of the intake interview made for appropriate as-

signments initially; where new cases needed to be added, they could be assigned selectively with a view to variety for the individual student's caseload. Whereas during the first year 4.9% of the 162 patients assigned in the routine fashion proved to be psychotic, requiring hospitalization within one to three visits; in the second year this category was eliminated.

The psychiatric social worker's advance knowledge of the patient and his social situation frequently offered a clue to the selection of the teaching conference where her contribution could be made most effectively. In addition, with the intake interview she had an actual tool to demonstrate interviewing techniques. One or two students regularly sat in with the worker to observe the verbal and nonverbal approach to the patient, following which there was informal discussion of the techniques used. This device answers the need of many students to see an actual interview with a patient.

Also the intake interview tended to give the student information with which to start thus reducing the natural anxiety concerning his first interview. A statistical study of these two years of experience reveals that the second year provided a more intensive experience in therapy for the students in that they had more interviews with fewer patients. For example during the first year only 21.5% continued after the first visit whereas 62.5% continued after the first visit in the second year.

COMMENT

THE CINCINNATI MEETING

The 107th annual meeting of The American Psychiatric Association was held at the Netherland Plaza, Gibson, and Sinton Hotels in Cincinnati, Ohio, May 7-11, 1951. There was a total registration of 2,772 persons, 1,386 of whom were members, 798 non-members, and 588 guests. This year marked the first election of officers by mail vote and apparently such vote was highly satisfactory to the membership. Of the 5,112 eligible voters in the Association, a total of 3,633 ballots were cast. The following were elected to office from candidates presented by the Nominating Committee and by Petition in accordance with the new constitutional provision: President-Elect, Dr. D. Ewen Cameron; Secretary, Dr. R. Finley Gayle, Jr.; Treasurer, Dr. Howard W. Potter; Councillors, Dr. J. Fremont Bateman, Dr. Frank J. Curran, and Dr. William B. Terhune; Auditor, Dr. Hervey M. Cleckley.

One of the highlights of the meeting was the very inspiring Presidential Address made on Monday morning by Dr. John C. Whitehorn on the subject of "The Individual Psychiatrist and Social Psychiatry." On Monday evening, Mr. Oren Root, President of the National Association for Mental Health, gave a very stimulating address on "Mental Health—A Layman's Point of View." The annual academic lecture was given on Wednesday morning by Dr. David Levy on the "Critical Evaluation of the Present State of Child Psychiatry" with interesting discussions of the various phases of the address by Dr. Leo Kanner, Dr. Frederick H. Allen, and Dr. George E. Gardner.

A luncheon was held on Tuesday for all Fellows of the Association at which time certificates were presented to 311 new Fellows.

The annual dinner on Wednesday evening was an enjoyable affair and was attended by 436 members and guests. A long-established precedent was broken by having no formal address. The Past President's medal was presented to Dr. John C. Whitehorn by Dr.

Leo H. Bartemeier, the incoming President, and retiring Officers, Councillors, and Committee Chairmen were presented with Certificates of Commendation. Dr. Samuel W. Hamilton, Chairman of the Committee of Judges for the Mental Hospital Achievement Award, reported the unusual difficulty of making the Award this year because of the exquisite care with which the applications were prepared and because of the evidence of sound and progressive work done in the institutions applying for the Award. The Committee's decision is as follows. The highest award and one-half of the prize money was awarded to the Independence State Hospital, Iowa, for an essay entitled "Progress and Change of Atmosphere." The second award and three-tenths of the prize money went to Logansport State Hospital, Indiana, for an essay on "Progress in Transition into a Treatment Hospital." The third award and one-fifth of the cash prize went to the Crease Clinic of Psychological Medicine at Essondale, British Columbia. Honorable Mention was made to The Arkansas State Hospital at Little Rock for their project entitled Psychiatric Aide Improvement Program, to The Topeka State Hospital for its chronicle of recent development, and to the Crownsville State Hospital of Maryland for "a Successful Volunteer Program Despite Handicap."

Dr. Nolan D. C. Lewis presented the Hofheimer prize to Dr. Jurgen Ruesch, Langley-Porter Clinic, University of California Medical School, as principal investigator in the study of duodenal ulcer in naval enlisted personnel and civilians. Collaborating with Dr. Ruesch were Dr. Robert E. Harris, associate professor of medical psychology and chief psychologist, Langley-Porter Clinic; Carole Christiansen, senior clinical psychologist, Langley-Porter Clinic; Martin B. Loeb, assistant professor in Department of Sociology, University of California; Sallie DeWees, lecturer in social welfare, University of California; and Dr. Annmarie Jacobson,

research associate in psychiatry, University of California Medical School.

The Round Table discussions were most interestingly conducted and were attended by 750 members and guests.

Mrs. Howard D. McIntyre was Chairman of the Women's Committee on Arrangements, which provided delightful entertainment to the 588 ladies who registered. A very lovely tea was given on Monday afternoon for the ladies at the Taft Museum and trips to various interesting points in and around the city were provided including a boat trip on the Ohio River.

On Friday morning, Dr. John C. Whitehorn, retiring President, presented the gavel to Dr. Leo H. Bartemeier, his successor, who at that time assumed the Presidency of the Association.

Among the important actions of Council approved by the members during the business sessions, the following are of special interest:

Mr. Austin M. Davies was designated as Business Manager of the *AMERICAN JOURNAL OF PSYCHIATRY*.

The Central Inspection Board was authorized to charge a fee to the states for hospital inspection and rating service for a period of two years.

It was decided to submit to a mail ballot by the membership the matter of the consolidation of the Washington and New York offices for purposes of efficiency and economy. The membership will be given the chance to vote for Washington, New York, or other preference for the situation of the consolidated office.

It was also decided to submit to the membership for mail voting several proposed amendments to the By-Laws with reference to qualifications for membership in affiliate and district branch societies.

A "Manual of Organization and Policy" prepared by President Whitehorn and Medi-

cal Director Blain was approved and the Medical Director authorized to publish 10,000 copies for distribution to the membership.

The Arkansas Psychiatric Society was accepted as an affiliate society and several societies provisionally accepted last year were formally accepted as affiliate and branch societies.

Dr. David Boyd, Jr., was elected as representative of the A.P.A. on the American Board of Psychiatry and Neurology to replace Dr. Karl Bowman. The following appointments to the Committee on Membership were approved: Dr. Robert O. Jones, Chairman, Dr. Herbert S. Gaskill, Dr. Douglas W. Orr, Dr. Alexander Simon, and Dr. David C. Wilson.

Eight proposed amendments to the Constitution and By-Laws, submitted by Petition, were disapproved, but approval was given to several amendments suggested by the Committee on Constitution and By-Laws. These will be set out in full in a later report.

It was decided to hold the annual meeting in 1952 in Atlantic City, New Jersey, May 12 to 16.

Approved the election of Dr. George S. Stevenson and Dr. Frank Braceland to the Executive Committee.

It was agreed that the meeting was one of the most successful in the Association's long history, and this was due in large part to the work of the very capable Committee on Arrangements under the chairmanship of Dr. Thomas A. Ratliff and the thorough work done by the Executive Assistant, Mr. Austin M. Davies. The Association expressed its gratitude and appreciation to this Committee, to Mr. Davies, the Woman's Committee on Arrangements, and to Dr. David Young and his Program Committee for the very excellent selection of papers.

R. FINLEY GAYLE, JR., M. D.,
Secretary.

CRACKPOT LITERATURE AND RESPONSIBLE JOURNALISM

Freedom of the press is a precious heritage. One wonders though, whether it includes the right to poison the public with medical misinformation or to hoax the reader with false hopes. All branches of

medicine are harassed by peddlers of panaceas. Whether motivated by profits, prestige, or paranoia, these hucksters promise health and happiness to all who buy their wares. You can purchase books and articles

on cures for cancer or poliomyelitis or asthma. Psychiatry, however, has more than its share of both crackpot crusaders and vendors of cures for cash.

Consider first the book publisher. An author comes in with a manuscript describing his method of curing mental or emotional disorders by mumbo-jumbo. He is loaded down with testimonials. The publisher perhaps asks a responsible psychiatrist to review the script first. The psychiatrist puts thumbs down on the book. "But," protests the author, "are you going to allow an entrenched group with a vested interest to dictate to you? How about the Magna Carta and the Constitution? Must every new idea be submitted to censorship by those who want to preserve the status quo? After all, they once laughed at Christopher Columbus. How can science make progress if new ideas are thus to be aborted before birth?" The publisher is perhaps impressed with this appeal. Or maybe he is influenced by the fact that popular books on psychiatry and psychology sell as easily as commemorative stamps. So he accepts the script and a new fad grips the country. Some early schizophrenic tries the new ritual and deteriorates into chronic psychosis before sounder methods of treatment can be applied. A number of psychoneurotics sample the technique, and after a brief period of help, some cross the frontier into psychosis; others commit suicide. A few dangerous paranoids are allowed to run loose in the community while taking the new 10-treatment cure. Perhaps they slaughter some innocent bystanders who symbolize their persecutors. No matter: the author has catapulted into transient fame; the publisher has earned a few thousand extra dollars. Next year there will be a new fad.

Newspaper items present a special problem. Such articles, unless otherwise labeled, are supposed to be factual reports. And the newspaper editor faces an immediate deadline. If a responsible medical organization is asked to comment on the story, that comment must be made at once. The editor is

getting out a newspaper, not a yearbook. He cannot wait for the next meeting of the special committee. Unless the organization has machinery for giving the publisher an immediate reaction, the item will go to press without responsible prejudgment. Affiliate and district branches of the American Psychiatric Association might well consider setting up such machinery (or lubricating existing machinery) and making it known to local newspaper officials that authoritative comment can be obtained swiftly whenever a psychiatric story comes in on the wire.

Public conscience once allowed the wholesale grocer to pack poisonous preservatives into his tin cans, on the theory of *caveat emptor*. It no longer allows it. Indeed, no responsible industry wants to be party to any such transaction. But a few irresponsible manufacturers of food and drug products (and sellers of securities) brought government inspection and control down on the heads of the whole industry. One would hate to see publishing suffer a similar fate. Yet a few publishers, with callous disregard of public weal, continue to peddle ideas that cruelly raise hopes of cure or propagate dangerous techniques of treatment. Revolt against this species of fraud may bring down on the publishing trade the same kind of controls that now harass the seller of securities or the manufacturer of drugs. If the free market in ideas is thus curtailed, the publishers will have no one to blame but themselves.

Our own organization, and every responsible body of scientists, stands ready to advise publishers. It is not a question of censorship by a vested interest. Rather it is a matter of good business judgment to seek advice from experts before embarking on a new venture. Pandora-like, the press is still free to open the box. But once it is open, there can be no control of what flies out. Perhaps there is some comfort in the fact that the last thing left in Pandora's box was hope itself.

HENRY A. DAVIDSON, M.D.

NEWS AND NOTES

DR. BRACELAND TO DIRECT THE INSTITUTE OF LIVING.—The Board of Directors of the Institute of Living, Hartford, Conn., have announced the appointment of Dr. Francis J. Braceland as psychiatrist-in-chief and it is expected that he will take over the directorship of the Institute in July.

Dr. Braceland has been professor of psychiatry at the Mayo Foundation, University of Minnesota, and is presently secretary and treasurer of the American Board of Psychiatry and Neurology and a Councillor of the American Psychiatric Association. He graduated from the Jefferson Medical College in 1930 and has done graduate work in Zurich and London as a Rockefeller Fellow. In addition to a long teaching experience he served in the Navy as Chief of the Division of Neuropsychiatry and for this service was awarded the Legion of Merit.

The Institute of Living is to be congratulated on securing as director a psychiatrist of Dr. Braceland's prominence.

PSYCHIATRIC AIDE OF THE YEAR.—At an award ceremony launching Mental Health Week and attended by leading health and mental hospital experts, Mrs. Forrest Adams of Greystone Park State Hospital, New Jersey, was named Psychiatric Aide of the Year. The citation and a \$500 award, presented by the National Association for Mental Health, for outstanding service, were made possible by the Catherwood-Kirkbride Fund for Research in Psychiatry.

Mrs. Adams took first place in the nationwide competition among 27,500 hospital aides. Five additional aides received cash awards of \$50 each for "distinguished performance": Mollie Switzer of the Napa State Hospital, Imola, Calif.; Charles E. Redifer of the Brentwood VA Hospital, Los Angeles, Calif.; Harlan Peterson of the Topeka State Hospital, Topeka, Kans.; Hubert T. Gunnels of the U.S.P.H.S. Hospital, Fort Worth, Tex.; and Frank Kwint of the Milwaukee County Asylum, Milwaukee, Wisc. In addition, 84 other aides were recognized

for "meritorious achievement" in local ceremonies in their communities.

Mr. Oren Root, president of the National Association for Mental Health, in announcing the awards stated that they are presented "to honor the work being done by high caliber mental hospital personnel who are going far toward removing the 'snake pit' stigma from our mental institutions."

CANADIAN MENTAL HEALTH AWARDS.—During Mental Health Week, which in Canada was observed May 1-7, 1951, men and women of the psychiatric attendant and nursing staffs of the mental hospitals who had rendered long and outstanding service were specially honored. Each province nominated one from these professional groups to receive the Canadian Mental Health Association Award, which took the form of a fine watch and suitably inscribed certificate. In most provinces the presentation of the award was made at a public meeting. In one instance the attendant so honored had a history of continuous service in mental hospital work of over 50 years. Several had over 40 years' service.

GESELL INSTITUTE OPENS.—On May 19, 1951, the new Gesell Institute of Child Development, New Haven, Conn., was officially opened. This Institute has been set up to carry on the work begun at the Yale Clinic of Child Development under the leadership of Dr. Arnold Gesell.

At the informal ceremonies a portrait of Dr. Gesell, commissioned by a group of physicians, students, parents, and former associates was unveiled.

The Institute has been in operation to a limited extent for several months under the acting directorship of Dr. Francis L. Ilg. Dr. Gesell will be research consultant. The staff has set for itself the task, Dr. Gesell said, "of further exploring and defining the developmental forces which shape the young adolescent in our complex culture."

Readers of the JOURNAL are familiar with

the books already published by Dr. Gesell and his staff on the material gathered from studies of infants and children up to the age of ten. A similar report on the adolescent is planned. "A group of 100 children have been seen periodically since birth or early childhood," Dr. Gesell said, "and the ultimate adolescent study will have at least fifty cases for each year, ten to sixteen." One of the areas of investigation concerns the relationship of child vision to personality patterns.

DR. EARL FULLER DIES.—We regret to record the death on May 16, 1951, of Dr. Earl W. Fuller, director of the Northern New Jersey Mental Hygiene Clinic of Greystone Park.

Dr. Fuller, who was 65 at the time of his death, was a graduate of Albany Medical College (1908) and had held various important posts in the psychiatric and mental deficiency fields. He had served as acting superintendent of the Rome State School, as psychiatrist with the New York State Commission for Mental Deficiency, and as superintendent of the Pennhurst (Pa.) State School. He had held the Greystone Park position since 1929 and had been the first president of the New Jersey Association for Mental Hygiene Clinics. He was also consulting psychiatrist to the Englewood, N. J., Hospital and to the Victoria Foundation at Morris Plains, N. J.

Dr. Fuller was a diplomate of the American Board of Psychiatry and Neurology and was a member of numerous medical societies. He had been a Fellow of The American Psychiatric Association since 1921 and had therefore earned his Life Fellowship at the annual meeting this year. His interests beyond the field of medicine are indicated by the fact that he was a member of the Morris County Historical Society and of the New York State Historical Society.

PENNSYLVANIA HOSPITAL'S 200 YEARS.—The May 1951 issue of *Hospitals* contains an excellent well-illustrated article giving an outline of the history of the oldest hospital in the United States, which has played so large a part in the development of American psychiatry. Here is sketched the work of

Benjamin Rush, who initiated the treatment of mental patients in the general hospital, and of his successor, Thomas Kirkbride, who devised "the Kirkbride Plan" of building rules.

A statement of Kirkbride in his campaign for public education deserves quotation: "It should never be forgotten that every individual who has a brain is liable to insanity precisely as everyone who has lungs is liable to pneumonia."

Hospitals is to be congratulated for this fine contribution to medical history.

BUILDING AT MANSFIELD (CONN.) TRAINING SCHOOL NAMED FOR DR. STORRS.—Dr. Neil A. Dayton, superintendent of the Mansfield State Training School and Hospital, has announced that a boys' dormitory at that institution has been named Storrs Hall in honor of Dr. Harry A. Storrs, director of Letchworth Village, in recognition of his fine leadership in the field of mental deficiency, which has brought him international distinction.

NEW MICHAEL REESE HOSPITAL UNIT.—A news item under this title in our September 1949 issue announced the launching of construction of the new building to house Michael Reese Hospital's Institute for Psychosomatic and Psychiatric Research and Training. The finished building was dedicated on June 2, 1951. Dedication ceremonies were preceded by an all-day scientific conference on Friday, June 1. Psychiatrists, other specialists, and educators from centers throughout the United States took part in the conference, titled "Some Aspects of Mid-Century Psychiatry."

VA HOSPITAL, NORTH LITTLE ROCK, ARK.—The fourth annual neuropsychiatric meeting at the Veterans Hospital, North Little Rock, Arkansas, will be held February 28-29, 1952. The 1951 meeting marked the thirtieth anniversary year of the institution.

AMERICAN ACADEMY OF NEUROLOGY.—Meeting on April 11 and 12 in Virginia Beach the Academy elected the following

new officers: Dr. Pearce Bailey of Washington, D. C., president; Dr. Howard Fabing of Cincinnati, president-elect; Dr. Joe R. Brown of Minneapolis, treasurer; and Dr. Francis M. Forster of Washington, D. C., secretary.

A two-day course in neuropathology was offered, which was so successful that it will be repeated at the 1952 meeting. This will be held in Louisville, Kentucky on April 24 and 25, 1952. There will also be a course in neuroroentgenography and electroencephal-

ography. Requests for papers on the program are to be sent to Dr. Alexander Ross, University of Indiana, accompanied by title and abstract, by November 1, 1951.

CORRECTION.—As the JOURNAL goes to press we are informed of an error in the bibliography of a section in the annual Review of Psychiatric Progress, appearing on pages 521 and 523 in the January 1951 issue. The reference (No. 44) should read "Perry, H. A., and Levy, S."

REPORT OF THE BOARD OF TELLERS

Following is a report of the mail ballot for the election of officers of The American Psychiatric Association for the year 1951-1952 as supplied by Dr. Crawford N. Baganz, chairman of the board of tellers:

President-Elect:

D. Ewen Cameron	(N)	3,008 votes
Jacob L. Moreno	(P)	440 votes

Secretary:

R. Finley Gayle, Jr.	(N)	3,142 votes
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Treasurer:

Howard W. Potter	(N)	2,292 votes
Lawson G. Lowrey	(P)	956 votes

Councillors:

J. Fremont Bateman	(N)	2,320 votes
William B. Terhune	(N)	2,486 votes
Frank J. Curran	(N)	2,534 votes
Martin H. Hoffman	(P)	1,148 votes
George N. Thompson	(P)	1,307 votes

Auditor:

Hervey M. Cleckley	(N)	2,368 votes
Roy D. Craig	(P)	916 votes

1952 PROGRAM ANNOUNCEMENT

Material for presentation to the Atlantic City meeting handled by the Committee on Program includes (1.) papers, (2.) films, (3.) scientific exhibits, and (4.) round tables.

Any of the above, particularly papers, should be described in an abstract of some 200 words, so that the Committee can evaluate its contents and suitability. Data about films should be sent to Dr. Rennie, and about scientific exhibits to Dr. Rose, but otherwise please write to any member of the Committee.

The deadline is November 1, 1951, and the Committee will meet early in November to review material submitted and to set up the program.

The Sections will please work up and submit their programs for review by the Committee at its November meeting. The November 1 deadline also applies here.

The Committee on Program wishes to thank all participants in the program of the Cincinnati meeting.

DAVID A. YOUNG, *Chairman*
 TRAVIS E. DANCEY
 ALBERT H. FECHNER
 EDWIN GILDEA
 WILLIAM A. HORWITZ
 ZIGMOND LEBENSOHN
 HELEN VINCENT MACLEAN
 THOMAS A. C. RENNIE
 JOHN A. ROSE

BOOK REVIEWS

CURRENT THERAPY 1951—Latest Approved Methods of Treatment for the Practicing Physician. Edited by *Howard F. Conn, M.D.* (Philadelphia and London: W. B. Saunders Company, 1951. Price: \$10.00.)

In this day and age when such rapid strides are being made in our knowledge of the prevention and treatment of disease, it is out of the question for the student and practitioner of medicine to keep abreast of all this information or to use it intelligently from the perusal of a limited number of texts or journals. The field becomes so wide and the value of some of the new methods so controversial that authoritative statements outlining their best usage becomes a practical necessity. Fortunately "Current Therapy" is devoted to exactly this purpose.

It is, in a sense, an encyclopedia of the most recent and approved methods of therapy in medicine, and its specialties. Among the long list of contributors are many men of eminence.

The volume is composed of 16 sections or chapters, which, except for the first and last, are arranged according to systems. The first section is devoted entirely to infectious diseases and the last to a "Roster of Drugs and Dosages." The arrangement of each section follows very closely the design of a textbook of medicine.

The directions are in general concise and didactic. All matters of controversy have been eliminated, though widely advertised remedies, such as the use of the antihistamines for the common cold have been condemned when found wanting. One authority, at least, is quoted as being responsible for each particular form of treatment, but bibliographies have been omitted.

Statements are by no means limited to the use of drugs, for all forms of therapy including dietetic procedures as well as prophylaxis and preventive measures are considered. This broad approach results in great variation in the length of the different sections. For instance the subject of diabetes mellitus, including tables, specimens of diet with measures employed to combat coma and to relieve complications, covers 24 pages, whereas the treatment of hyperparathyroidism is condensed into 2 paragraphs consisting of (1) "Preoperative and Operative Management" and (2) "Postoperative Management." Section 12 on diseases of the nervous system includes 30 subsections covering 67 pages. Consideration is given not only to anatomical conditions, such as abscess of the brain and multiple sclerosis, but to the functional disturbances including headache, the psychoneuroses, and psychoses. Eight pages are devoted to the latter subject. In addition to this chapter psychotherapy is considered as a part of the treatment of several diseased states, among which are hyperemesis gravidarum and hypertension.

The final section contains a great deal of useful

information. The Roster of Drugs furnishes data on the drugs additional to that given in the main text; the tables of weights and measures with directions for making percentage solutions is helpful, and the comprehensive index is excellent.

The well-considered arrangement of an enormous amount of information, and the capitalized headings to sections and paragraphs combined with the complete index, facilitate the use of this volume in a remarkable manner. "Current Therapy" is to be highly recommended.

WARFIELD T. LONGCOPE, M.D.,
Lee, Mass.

THE SCIENCE OF CULTURE. By *Leslie A. White.* (New York: Farrar, Straus and Co., 1949. Price: \$6.00.)

Although the consideration of culture is a vital part of any psychiatric study, since we cannot intelligently interpret any behavior out of its cultural context, I think it is probably true that most psychiatrists have given no serious thought to the science of culture. Many of us have opinions or ideas picked up in passing and more or less take for granted that we know all we need to know about culture. Some of us have given the subject some thought, but have usually considered only the patient and his immediate social group and have neglected entirely the broad subject of the culture of mankind in the total.

Professor White, who is chairman of the Department of Anthropology at the University of Michigan, has brought out a book which is aggressive, argumentative, and challenging. It is certainly an understatement to call it provocative. It takes issue with many cherished beliefs and philosophies, and has aroused much heated opposition. It will undoubtedly continue to do so. White explains all this and answers it in the book, many chapters of which have been previously published in periodicals.

White's central thought is that culture, while it originated in the mind of man, and is based on man's unique capacity to use symbols, is not merely the aggregate of individual beliefs, but has an existence independent of any individual, being extrasomatic and suprabiotic. Man does not possess culture—he is possessed by it. Culture is a continuum, it develops and evolves. Local variations are modified by contact with each other, and culture can be studied and understood only in terms of culture, not in anatomic, psychological, or even sociological terms.

Of paramount significance to psychiatrists is White's argument as to the relationship between psychology and "culturology." The author gives a good deal of space to this. He states that the proper scope of psychology is to study the reaction of the individual to his culture, and the role of the cul-

turologist is to examine customs, beliefs, languages, etc., as if the individuals affected were constant factors. In the one, the scientist analyzes and dissects, and in the other, he views the problem in the total—one is the cell, the other the function of the organ. In White's words "both sciences are essential to a comprehensive interpretation of human behavior. It is necessary, however, in order to avoid confusion, to know and respect the proper boundaries of each."

White is evidently sceptical (to say the least) of many psychoanalytical formulations, but is quite willing to leave their verification or disproof to the practitioners in the fields of psychology and psychiatry, as long as the problems are in the field of individual reactions. However, he is outspokenly critical of any attempt to explain such things as the incest taboo, democracy, the origin of war, racial prejudice, etc., on a Freudian basis. The subjective experiences of the individual, he concedes, are real enough, but are the result and not the cause. The questions as to why one people paint their toenails and another tattoo their bodies, why one group drinks beer and another chews the betel nut, why one plays baseball and another cricket, why one practices polyandry, another polygamy, and a third monogamy, why one considers mixed bathing in the nude to be quite proper and another proscribes the sight of women's faces, all require explanations, which can only be made on a general, nonindividual basis. They are suprapyschological, and the responses of the individual to them have no significance in their causation.

Another subject given thorough consideration is the role of the "genius" in history. Readers familiar with Toynbee will find a startling divergence in thought here. In a careful and complete fashion the author examines the familiar idea that great men have "changed the course of history" or have affected in a significant degree the beliefs and events of their times. This, he argues, is another example of mistaking cause for effect. He adduces convincing evidence that such things as the invention of the steam engine, the origination of the calculus, and the development of nuclear physics were events that inevitably had to occur as a result of cultural evolution. These phenomena in turn produced cultural changes, but the individuals involved were no more responsible for them than Newton was responsible for gravitation. Geniuses, in short, are made by their times. They may or may not be of superior endowment, and many individuals of equal or greater endowment remain anonymous because of the accident of time and place of their birth.

Culturology, in White's opinion, is the culmination of scientific progress, and its concept is revolutionary in its implication. The idea that man does or can control his civilization is the final vestige of anthropomorphic thinking, and in discarding such a philosophy the scientist can now understand clearly

the phenomena in this field. While, White says, man can no more influence cultural events than he can meteorological manifestations, he can analyze and predict them, and thus perhaps adjust himself to them as he now does to weather. At any rate, being able to understand and explain them is better than interpreting them in anthropocentric or supernatural terms.

While White's principles are quite opposed to some of Toynbee's, one gets somewhat the same effect in reading this book as in reading "A Study in History." Man is, after all, a mere incident in the vast procession of cosmic events. Much anxiety, guilt, and fear results from man having "created God in his own image." Perhaps, if each of us has a more humble and a more realistic idea of his own insignificance, we can all concentrate our efforts and energies on things we can really do.

This book should be in the libraries of all serious students of human behavior.

GRANVILLE L. JONES, M. D.,
Williamsburg, Va.

MENTAL TESTING. By Florence L. Goodenough.
(New York: Rinehart and Co., 1949.)

Dr. Florence Goodenough has from time to time made outstanding contributions to the field of mental testing. The recent comprehensive book "Mental Testing," which is the result of many years of experience both in training students and in actual clinical practice, is no exception.

The book is divided into 4 parts: historical orientation, principles and methods, tests and scales, applications. The first few chapters give a brief historical review both of the social problems that showed the need for tests and the progress in scientific knowledge that gave rise to the idea and provided for its implementation. Dr. Goodenough states in the preface that she is of the opinion that a large number of persons presently engaged in testing lack an understanding of the theoretical principles underlying the procedures that they employ. This point of view is reflected in the content of Part II, where she considers in detail some of the theories and assumptions underlying the construction, administration, and interpretation of tests. In using the book some training in statistics is desirable but not essential. Sufficient statistical material is introduced with the purpose of enabling the reader to make more intelligent use of test results and avoid common misinterpretations.

"Mental Testing" is designed to serve as an orientation text for students planning to enter the field of testing. Clinical psychologists, however, will find that it contains material of interest to them. Other professional workers who make use of the results of tests that they do not themselves administer will find that it gives them a theoretical background as well as considerable practical help.

LEOLA E. NEAL, Ph.D.,

Department of Psychology,
University of Western Ontario.

NEUROPSYCHIATRY FOR NURSES. By *Irving J. Sands, M.D.* (Philadelphia: W. B. Saunders Company, 1948.)

A popular text like this represents an effort to steer a middle course between bulky detail and overpruned simplicity. Some criticisms have been heard on both sides. The sections on neuroanatomy and endocrinology summarize well our knowledge of those matters, and elementary medical psychology fills most of the book. The chapter on special medical procedures is particularly well done. The publishers list 12 discussions that are new in this edition, and no doubt such a process of gradual revision will be continued at each new printing. It may not be captious to suggest a few points, if only in phraseology, where modified statements might be given consideration.

The author claims that, by understanding the functions of the sex hormones, we can fully understand the characteristics of each sex. That may be philosophically true, but at present human beings have not reached complete understanding of either topic. With the new section on meningitis, we cannot agree that parietic patients are usually grandiose, though a considerable number are. Frequently the speech is not slurred.

We wonder if psychiatrists generally think that pregnant women should stop working at the fourth month. Perhaps many of them would be so unhappy when idle that the psychological damage done would far outweigh any penalty inflicted by nature for being active during what is a normal physiological experience.

The description of dementia praecox is traditional. Many cases appear not to be progressive; after a very stormy initial period, the patient reaches a better level. It is hard to agree that hospital residence is always a loss to the patient. Many patients leave a hospital greatly improved. As regards the schizophrenic, and the manic-depressive as well, they often have more insight than the author admits. Most psychoneurotics are not hospitalized, but a considerable number are. Objection may be raised to the statement that prior to this century, when a patient recovered, it was usually in spite of the treatment. Many hospital reports and no small number of case histories lead to a different conclusion. To the list of popular tests should be certainly added the Rorschach.

The author is a devoted and very competent psychoanalyst, and in this book he presents the theory of psychoanalysis at some length. It must be hard for a pupil nurse to understand, and your reviewer is not certain that the job can be better done, short of a whole volume. The intrusion of paragraphs on this theory sometimes makes the reading of a disease description more difficult. Nevertheless the fact that this book is already in its fifth edition shows that it has been very helpful, and a difference of opinion about details should not obscure the merits of the work. In many regards this would be a valuable book for medical students as well as nurses.

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A TEXTBOOK OF PHYSIOLOGY (HOWELL) Sixteenth Edition. Edited by *John F. Fulton, M.D.* (Philadelphia: W. B. Saunders Co., 1949. Price: \$10.00.)

The latest edition of this well-known textbook has undergone considerable alteration, both in appearance and in content. A somewhat larger page and a change in type have resulted in a volume that is easier to read and to handle than was its predecessor.

There has been widespread revision of the textual material. The most important addition is an entirely new section, contributed by Dr. Jane Russell, on the endocrine system, which corrects a deficiency in the previous edition. A number of new chapters have been added, including one on cerebrospinal fluid by Livingstone, another by Ruch on the physiology of micturition, and a third on the gastrointestinal tract by Fenton and Cowgill. The chapter on the genetic aspects of physiology has been omitted from the new edition.

The former section on nerve and muscle has been divided into two separate sections. Lloyd has made numerous changes to the first, on "The Principles of Nervous Activity." The new material on muscle consists of two chapters: one entitled "Functional Activity of Muscle" by Gelfan, and the other "Energy Transformations in Muscle" by Wilhelmi. These changes, entirely apart from their value as contributions, have resulted in a desirable improvement in continuity in the text.

The section dealing with the events of the cardiac cycle has been revised extensively, and now contains some 50 pages on the electrocardiogram. The new portions include unipolar and chest lead recording, and some aspects of interpretation. There has been considerable rearrangement of the section on the circulatory system.

More than one-third of the book is given over to the principles of nervous and muscular activity, and the motor and sensory functions of the nervous system. There is good coverage of the special senses. This has been accomplished without depriving other important aspects of physiology of their necessary space.

The new edition gives us a better classification of the subject matter, a clearer exposition of our present knowledge, and a wider coverage of the field of physiology. The revisions have increased the value of the book both for teaching purposes and as a reference text.

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THE ANALYSIS OF POLITICAL BEHAVIOR. By *H. D. Lasswell.* (New York: Oxford University Press, 1948.)

Although the papers brought together in this volume range over a wide area in subject matter, and although the dates of their original publication extend over the whole period from 1932 to 1945, they nevertheless constitute a very definite unity. What holds the work together is Professor Lasswell's deep and enduring concern with "a science

of democracy." Questions of value are thus settled at the very beginning; the establishment of a democratic society is the aim and the scientific analysis of political behavior is instrumental to this aim. Thus, whether the focus of attention be upon the analysis of societies in terms of skill groups and their relative influence, or upon the meaning of Hitlerism or of the garrison state, or upon the observation of mass behavior or upon the study of individual attitudes, the basic question is always the same, *i.e.*, what are the factors that condition the survival of democratic values.

Those who remember Professor Lasswell's *Psychopathology and Politics* will not be surprised to find that psychology, psychiatry, and Freudian psychoanalytic theory have a large place within the over-all framework. It is stressed, for example, that the meaning of any social object—person, institution, policy, practice, doctrine, myth, legend—"may be interpreted in terms of its appeal to one or more of these main divisions of personality: impulse, conscience, reason." And certainly no student of human personality, after reading the following, could claim that his discipline had not been given sufficient attention. "It is only wise foresight for any society that aspires toward democracy to use every means within its power to make sure that the persons who come to adulthood possess characters whose basic structure is compatible with democratic values."

Although, as indicated above, some of the papers in this collection date back a number of years they are highly relevant to the contemporary scene, and they contain more than a few prophetic statements. Psychiatrists who strive for a terminology that permits them to deal objectively with emotionally charged material will be forced to admire the achievements, in this regard, of the political scientists. It would be very difficult for most of us to discuss some of the topics treated in this book without using words that were fighting words for somebody; yet Professor Lasswell is master of a vocabulary that gives his writing an aspect of cool detachment that seems sometimes to border on the superhuman.

Any psychiatrist, psychologist, or psychoanalyst who is interested in using the facts and concepts from his field in trying to gain an understanding of the sweeping events of our time will want to read this book.

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FIELD OF SOCIAL WORK. By Aaron Fink. (New York: Henry Holt & Co., 1949. Price: \$3.75.)

Mr. Fink has succeeded in his objective of describing the how and why of casework with as little use of technical language as possible. Persons in the field, or training for it, will find valuable its comprehensive picture of the historical and philosophical development of social work. Persons in related fields, board and community leaders,

will find this interesting and easy reading. However, their desire for understanding social work must be more than superficial, for, though Mr. Fink has presented material in nontechnical terms, he has by no means "popularized" it. It is a book whose scholarliness is enhanced by clear writing.

Laymen, whether interested in social work or not, should read the sections describing contemporary public welfare and social security. The content is basic to an understanding of contemporary America, whose concern is to meet the needs of citizens without encouraging destructive dependency. This section is basic to good citizenship.

It is regrettable that Mr. Fink describes the nature of social casework in his chapter on family casework. Though, traditionally, this may be where casework first developed, its roots are apparent in the origins of social welfare. Some of the problems for which, in the past, repressive legislation was often seen as solution are those that gave rise to social casework. The one who supports a welfare program fears abuse of his bounty. The one who receives may not wish to abuse this bounty but does so because of the discouragement and fear arising out of prolonged dependence. Social casework attempts to meet desire of giver and receiver for proper use of relief and assistance. If the discussion of social casework had come earlier in the book, its relation to legislation, past and present, would be more apparent.

The sections on medical and psychiatric casework will be of interest to physicians. The case material, and discussion, indicate the role of casework in helping a patient use the help of physician and hospital.

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CLINICAL BIOCHEMISTRY. Fourth Edition. By Abraham Cantarow. (Philadelphia: W. B. Saunders, 1949.)

Clinical Biochemistry is organized primarily for the benefit of the physician. It is concerned with giving a summary of the information dealing with the findings of the clinical laboratory. The common biochemical findings that are determined in a well-equipped hospital laboratory are summarized at the end of the book. The general principles of biochemistry are considered briefly under such headings as carbohydrate metabolism, protein metabolism, lipid metabolism, calcium metabolism, inorganic phosphorus metabolism, phosphatase activity, magnesium metabolism, and metabolism of iron, sulfur, and iodine. Common clinical test procedures are described. Water balance, acid base balance, and respiratory exchange are considered from the clinical point of view. Then various organ systems are considered, such as renal function, gastric function, liver and pancreatic function, cerebrospinal fluid, etc. It is noteworthy that brain function or central nervous system function and autonomic nervous system function are omitted. There are also

chapters on vitamins and hormones and on pregnancy and lactation. This book, while it presents present-day clinical biochemical facts, slights general principles and encourages the tendency to neglect the function of the whole organism and concentrate on isolated facts. It can be recommended as a practical reference for clinicians but it should not be considered as a textbook to replace the more comprehensive and fundamental texts of biochemistry.

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PSYCHODRAMA AND SOCIODRAMA IN AMERICAN EDUCATION. Edited by Robert Barilett Haas. (New York: Beacon House, 1949.)

This book is intended to be a description of the application of the psychodramatic techniques of J. L. Moreno to a variety of education, personal, and social problems. The material consists of 29 relatively short papers most of which must be classified as encomiums of psychodramatic method and "theory" rather than sober, valid demonstrations of the values and limitations of the techniques. The editor's foreword informs us that the book "reflects the towering influence of one of America's great educators" (italics in the original). The initial chapter by Moreno states that sociometry has gone one step further than the Einsteinian revolution in physics by postulating "that knowledge of the social universe is relative to its constituent actors and to the relations between them." At the end of the book is a glossary of terms that to this naive reviewer seemed ridiculous. An *inter-personal situation* is "Translated from the German 'Begegnungs-lage,' a term coined by Moreno. Translated it means inter-personal situation." *Metaphysics* is "The point of view of the creature." *Metapraxis* is "A term coined by Moreno. The point of view of the creator; the metaphysics of action; the locus of freedom." *Theometry* "deals with the locus nascendi of ideas and objects."

Between the imposing beginning and the "meta-physical" end lie the papers dealing with the concrete applications of psychodrama. Some are pure claptrap and some are too brief to be informative, but others are interesting examples of "psychodrama" and "role-taking" put to work. Among the latter is S. H. Flowerman's account of how socio-vocational status determines behavior, which was rather vividly demonstrated in a psychodrama dealing with the behavior of a high school principal faced with a delicate intergroup conflict problem. Equally interesting is Ernest Fantl's description of a psychodramatic working out of an employer-employee problem.

Psychodrama, with its emphasis on motor enactment as a central factor in the development of insight and behavioral modification, contains a powerful idea that for the most part has been neglected both by current psychotherapeutic methods and by educational practice, particularly in the area of

"higher learning." The idea deserves more effective exposition than it generally receives in this volume.

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ESSAI CRITIQUE DES NOSOGRAPHIES PSYCHIATRIQUES ACTUELLES. By Maurice LeConte and Alfred Damey. (Paris: G. Doin et Cie, 1949.)

The drawbacks of psychiatric nosology have, in this country, been increasingly apparent. It seems that the attempt to escape from them has been more successful here than abroad. The authors, in their critical monograph, attack the confusing and inadequate status of the French classification of mental illness.

This paramount problem besetting psychiatry is clear. Psychiatrists often disagree as to the diagnosis of a mental disease, and it is a frequent occurrence that at one time a patient may be said to have schizophrenia and later, perhaps after a period of recovery, a manic-depressive psychosis. These as well as other seeming inconsistencies in the diagnosis of mental conditions have been highlighted by the authors.

They are particularly interested in accounting for changes in diagnosis in the 50 cases they use as examples. There are the apparent changes and the real changes. The former arise from variations in the degree of illness, from the utilization of different names for the same disease, and finally, from disagreements between psychiatrists. This last category stems from a lack of common fixed meanings for certain psychiatric concepts and to a variety of bases for diagnosis (i.e., etiologic, symptomatic, etc.). The authors consider mental illnesses not as entities in themselves but as symptoms of biological disturbance.

The above formulations are neither recent nor profound. Although criticizing the latest psychiatric classification appearing in the literature of L'Institut National d'Hygiène for its inadequacies, the writers make no constructive suggestions. Instead they speak in vague terms of the necessity of further "somatodiagnostic," "biodiagnostic," and "sociodiagnostic" studies to clarify the course of clinical pictures. They yearn "to return to Claude Bernard" from whom they feel they would draw support in their logical, scientific approach to the dilemma, and invoke the spirit of Descartes who believed that what is doubted should be considered false. There appeared nowhere in the volume the use of the contributions of psychoanalysis to the understanding of mental syndromes. Instead, it was implied that analysis is a superfluous infiltration of a philosophical system into medical psychiatry.

In general, it can be concluded that the authors say nothing new, unless to our French colleagues. What they do say has been recognized as a principal problem long ago, and after saying it they stress that the difficulty lies in a fundamentally faulty approach to the solution, rather than in the complexity of mental sickness itself. No constructive

proposal is made, except that which most psychiatrists already agree upon, that is, to observe the clinical material from many aspects and in a scientific way. The psychodynamic aspect is not appreciated as one of the important ones.

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or as a text, and it is hoped that perhaps the editors, if they plan a revision, will plan a complete re-writing with the selection of an adequate staff and employ editorial discrimination far beyond that evident in this edition.

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ENCYCLOPEDIA OF CRIMINOLOGY. By *Vernon C. Branham and Samuel B. Kutash*. (New York: The Philosophical Library, 1949. Price: \$12.00.)

Any encyclopedia by its very title is expected to be a worth-while contribution to the literature. In the usual format such volumes bring together a large number of definitive articles which make readily available varied expert opinion. A notion of such a volume in the field of criminology is excellent and it is extremely unfortunate that this particular book falls so far short of one's anticipation. In some 527 pages, the entire field of criminology is covered, and while many of the brief articles are prepared by acknowledged experts, many other sections are merely definitions and extracts from already published volumes or media for beginners in the field to express their narcissistic natures. Since direct quotations from F. B. Gilbert's *Criminal Law and Practice of the State of New York* have contributed more items than any other source, it really should be listed as the major contributor.

The over-all content of the volume is extremely spotty, resembling in a general sort of way an American refuse can in which edible morsels of some value are tossed helter skelter with pure junk. There is an overemphasis in the psychiatric and psychology areas, probably a result of the specialized training of the editors. The senior editor, however, does not hesitate to penetrate fields ordinarily considered the problems of life-time experts and writes facetiously on such subjects as fingerprints, ballistics, etc. The resultant achievement is a sort of superficial literary review and not the complete sort of definitive article such as one expects in a genuine encyclopedia. An example of the many errors found is the article on scientific detection of deception. Statements such as "there is no logical medico-legal reason today for refusing admittance as evidence to the Psycho-Detecto-Meter, the writer's invention" indicate either the naivete of the editors, or their gross carelessness in permitting recommendation of methods that are looked upon with considerable skepticism by every worker in the field with the exception of the author concerned.

In fairness to the few excellent contributors, some of whom have done splendid jobs in their assigned areas, one must state that their sections are of value. The price of the book, however, is much too high for these few articles and the poorer material will certainly act to turn many readers away, with the feeling that if this represents criminology at its best much room for improvement remains. The book is definitely not recommended as a reference,

ORGANIZATION OF BEHAVIOR: A NEUROPSYCHOLOGICAL THEORY. By *D. O. Hebb*. (New York: John Wiley and Sons, Inc., 1949.)

Contemporary psychologists are by no means agreed as to the necessity or even the desirability of specifying the neural events that accompany a psychological event. The psychologist in the laboratory is concerned with isolating the variables of which behavioral change is a function. The neurology argument asserts that the real "explanation" of such functional relations is to be found in the nervous system activities that mediate them. The non-neurology argument points out that the behavioral change that occurs in consequence of the operation of relevant variables may be of several orders: it may be grossly behavioral, and this is the proper concern of the psychologist; it may be neural, and this is the concern of the neurophysiologist. But regardless of the psychologist's view of the place of neurology in his science, he may be intensely interested in "what takes place in the human brain in the interval between a stimulus and a response," to quote from the dust-jacket of Professor Hebb's book, and he will find this a provocative and sophisticated hypothesis as to the answer.

Psychological neurologizing in the past has tended to consist in demonstrations that the neural connections necessary to mediate a stimulus-response correlation are possible, a state of affairs that hardly requires proof. The telephone switchboard analogy, which suggests a CNS at rest until a sensory event sets up a localized disturbance, besides being contrary to fact, was remarkably sterile even as a model.

Hebb's theory gives both neurological fact and psychological fact their due. According to it, repeated sensory (interoceptive as well as exteroceptive) stimulations lead, through the growth of synaptic end-knobs, to the establishment of *cell assemblies*; these in turn take their places in *phase sequences*, to the end that the arousal of a cell assembly may arouse the rest of a phase sequence of which this particular cell assembly has been a member. This is learning at the cortical level. Insight is a new combination of assemblies. Motivation is singularly well-handled as a function largely of the timing of the phase sequence: as bodily conditions depart from the optimum the firing of the cells in an assembly become asynchronous (mediated by metabolism in the case of hunger) so that phase sequences are disrupted. The use of a timing variable permits the explanation of such states as inhibition, excitation, and fatigue without calling into

being extremely unlikely qualitative differences in cortical activity (as has been done in the past).

Hebb is able to discuss such phenomena as neurosis and such capacities as the IQ in the terms of his theory (if not always in close terms with it). Here also are some intriguing speculations as to the reasons underlying some of the well-known effects of psychosurgery.

This book is well written; it is venturesome and (of course, this is a prediction) it is "important": it will stimulate controversy and research.

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TEXTBOOK OF ENDOCRINOLOGY. Edited by Robert H. Williams, M.D. (Philadelphia: W. B. Saunders Company, 1950. Price: \$10.00.)

The editor and his collaborators have obviously given a good deal of thought to the planning of this book. Endocrinology alone is never enough. Hereditary influences and all facets of body chemistry, nutrition, and tissue potentials link and fuse intimately with endocrine function. The attempt has been made and achieved in this book to describe and give a composite picture of this interweaving of genetic factors of growth and development. At the beginning these general principles are carefully discussed so that the orientation of each endocrine gland in the scheme of things metabolic is set forth. As is pointed out, many clinical syndromes have been traditionally considered endocrine in origin though evidence now reveals how and why this was largely incorrect. The subsequent chapters discuss fully each endocrine gland from the clinical and investigative point of view. There is a special chapter on the influence of endocrine hormones on growth and development and one on the neuro- and psychodynamic aspects of the endocrinopathies. The consideration of obesity occupies one chapter and is first class. The last chapter deals with various tests for measuring endocrine function and the methods of assaying hormones. A good bibliography follows each chapter and the index is very complete.

This book will be valuable to postgraduate students of medicine of all ages and in every field of medicine as it touches all importantly. One is impressed with the demonstration, by the various contributors, of rich clinical experience with patients, as well as intimate personal knowledge of research in this field. As they are well aware one has to go further afield in medicine than "pure" endocrinology in order to understand patients who have endocrine disorders. The diseases and disorders are clearly described, the confusing features that so frequently bother us all are properly discussed. Treatment is thoroughly considered. The illustrations, a few in colour, are well chosen. For anyone who is serious in his interest in studying medicine as an art or science this book is valuable.

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THE NOSE. An Experimental Study of Reactions within the Nose in Human Subjects during Varying Life Experiences. By Thomas H. Holmes, M.D., Helen Goodwell, B.S., Stewart T. Wolff, M.D., Harold C. Wolff, M.D. (Springfield, Illinois: Charles C. Thomas, Publisher, 1950. Price: \$5.50.)

This is a very comprehensive study of nasal functions under a variety of circumstances; stimulation of the nasal mucous membrane by chemicals, variations in temperature, environmental situations that had provoked disturbances in the usual emotional equilibrium of the individuals studied.

The first 2 chapters deal with reviewing the physiology and range of variations of the nasal function in normal persons. In the remaining 12 chapters the authors report and scrutinize the literature and mainly the material obtained from their own clinical observations and experimental studies in human beings.

The research work is concerned with relationships between the function of the nose, the simultaneous function of other organs and systems of organs, and, in a larger measure, the function of the person. Moreover, the mechanisms of, and the structural changes occurring in, the abnormal functioning of the nasal and paranasal cavities are especially studied.

The function of the nose and the concurrent personality reactions were closely followed in one individual: in various life situations he showed both nasal and emotional disturbances—fear, dejection, tension, anger, hostility, resentment. On a larger scale, correlations between nasal symptoms and personality reactions to distressing experiences were investigated in a group of 100 patients with affections of the nose. The study, moreover, includes self-observations of their nasal function during sexual excitement by 3 young male investigators and observations of the nasal function during menstruation and pregnancy.

Of particular interest is the association of specific patterns of abnormal nasal function with specific emotional reactions: Thus, congestion and swelling of the nasal mucosa with marked hypersecretion and obstruction to the passage of air were observed in individuals suffering from a "conflict and with feelings of humiliation, frustration and resentment." There appeared to be a definite relationship between the intensity and duration of the conflict, and the severity and maintenance of the nasal disorders. On the other hand, vasoconstriction, hyposcretion, and shrinkage of the nasal mucosa were observed in individuals in whom life experiences had provoked fear, dejection, disgust, but no significant conflict. Similar abnormal hypoactivity of the nose was associated with "neurotic feelings accompanying sexual activity when conflict was absent."

Specific emotional reactions and specific changes in circulation in the nose and the stomach were concomitant in a patient with a large gastric fistula: Life situations that provoked fear or disgust were associated with pallor and shrinkage of the nasal

and gastric mucosa; reactions of anxiety, resentment, frustration, caused by a conflict, were accompanied by increased circulation and secretion in both the nose and the stomach. The authors regard the disorders in the nasal function as protective organismal reactions serving to alleviate tension and anxiety provoked by distressing life situations.

The competently planned and executed original studies contribute notably to psychosomatic research. Integrated with a well-selected bibliography and effectively illustrated, they should prove to be helpful to the practicing physician and the medical student.

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HECHOS Y TEORÍAS DEL PSICOANÁLISIS. By Ives Hendrick, M.D. Translated by Ludovico Rosenthal. (Buenos Aires: Editorial Sud-americana, 1950.)

This book is a translation of the second edition of Dr. Hendrick's *Facts and Theories of Psychoanalysis*, with which the North American public has been long familiar, and which has earned so much praise, both for its contents and for its manner of presentation. In reviewing the first edition, French (*Psychoanalytic Quarterly*, 3, 1934) remarked on the unusual vividness and freshness of this popular presentation, and later Bunker (*One Hundred Years of American Psychiatry*, 1844-1944) said that it was without much question the best general account of psychoanalysis in English." For the Spanish-speaking public a short appendix by the translator describes psychoanalytic activities in Hispano-America. So far as the reviewer's knowledge of the language enables him to judge, the translation is excellent. Angel Garma, a fellow student of Hendrick's at the Berlin Psychoanalytic Institute about 1930, writes an introduction in which he stresses not only the author's clarity of formulation, but also comments on his ability to appeal to the lay reader's own psychological intuitions.

For many years the Spanish-reading public has been fortunate in having many competent translations of the psychoanalytic literature. The translation of Freud's works is excellent, in some instances better than the English and French translations. For over 10 years the Buenos Aires psychoanalytic group has undertaken the translation of many older books and articles and, in the *Revista de Psicoanálisis*, has also provided translations of many articles as they appear in English. At the same time, the best recent books that appear in English are translated and published quickly. It is to this group that the Spanish reader owes the present excellent book.

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THE OTHER SIDE OF THE BOTTLE. First Edition. By Dwight Anderson. (New York: A. A. Wyn, Inc., 1950. Price: \$3.00.)

Dwight Anderson has written a book on a subject with which he is thoroughly familiar, from both the

inside and the outside. For many years he lived the problem, and for the past 18 years he has observed it from the standpoint of a former insider who can sift the wheat from the chaff in all the flood of articles and books now appearing about alcoholism. Whether telling of his own story or commenting upon such matters as diagnosis, treatment, prevention, or public education, his book represents the soundest in current thinking in the field. He makes no pretense of presenting fresh insights but succeeds very well in his avowed aim of providing a background for the understanding of the ailment and what can be done about it. The point of view is moderate, open, and substantially in keeping with modern psychiatry. It has no axe to grind and can be read safely and with profit by anyone who is interested for any reason.

For the psychiatrist, the book is probably not quite technical enough although the author's own case history contains illuminating flashes of awareness into the essential nature of the condition and he has well summed up the best of the present-day approaches to the sickness. For the psychiatrist's patient, who is facing the question of what his drinking may portend, and for the concerned relative or friend, who may be asking questions, the book provides many useful passages and chapters that should help answer the inquiries raised.

The author, skilled in public relations, has written a chatty, informative book always with a weather eye peeled to make his material go over acceptably. Without in any way impairing its scientific accuracy, he has admirably succeeded in telling the story of alcoholism in simple everyday language. His book has its definite place in the growing list of those devoted to the subject.

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PROCEEDINGS OF THE FIRST CLINICAL ACTH CONFERENCE. Edited by John R. Mote, M.D. (Philadelphia: The Blakiston Co., 1950. Price \$5.50.)

This book is a great tribute to the imagination and vision of John R. Mote, which led him to supply ACTH to a number of investigators for careful trials in each one's special field, thus covering a large number of widely different and apparently unrelated diseases in most of which an appreciable response might not have been expected. It is a collection of the reports of these workers and discussions of all participants at the First Clinical ACTH Conference, which was held in Chicago on October 21 and 22, 1949. Because most of the work was of relatively short duration and still in progress the papers were hurriedly written for early publication in the Proceedings, and the data presented are necessarily of a preliminary nature. Those interested in these subjects—and all medical people must be interested—will find papers based on wider experience appearing in various current journals. Until such time, these Proceedings present the most comprehensive reports available on the effects of administration of ACTH.

The book will always be of historical interest for it presents in one volume a large proportion of the earlier work on the physiological, psychological, and therapeutic effects of ACTH with many references to cortisone therapy. It is a milestone commemorating the sudden wave of interest in clinical research that came when it was shown by these investigators that the administration of ACTH, as well as having a highly beneficial effect on patients suffering from rheumatoid arthritis and rheumatic fever, would also abruptly change the course of other serious collagen diseases such as acute diffuse lupus erythematosus, periarteritis nodosa, scleroderma, and dermatomyositis, that it would dramatically relieve most allergic disorders, that it exerts a striking effect on the manifestations of many serious lymphocytic diseases, that it so changes the body's reaction that patients suffering from infections may be relieved of symptoms while the aetiological infecting organisms persist in their tissues, and that patients suffering diseases of obscure origin such as ulcerative colitis may be wonderfully benefited. Concomitantly these researches have led to rapid advance in the knowledge of the relation of nervous control through the hypothalamus of the pituitary and other endocrine glands and the body's reaction to various kinds of stress.

It is difficult to pick out single reports for special mention from amongst a group of interesting papers. The paper by Hume and Wittenstein on "The Relationship of the Hypothalamus to Pituitary-Adrenocortical Function" does not deal with the effects of ACTH administration; it presents experimental data indicating that an intact hypothalamus exerts a control on the release of ACTH through a hormonal influence on the pituitary gland. In a postconference discussion placed at the end of the paper on "Protein Metabolism in Disease States and the Effect of ACTH," J. S. L. Browne puts forward an interesting hypothesis that ACTH acting through the adrenal cortex brings about a "loosening" of body protein that is associated with a change in the body's reaction to a large number of different stimuli. In general, the papers describe clinical results and present metabolic data on steroid, inorganic salt, and nitrogen metabolism, as well as changes in electrocardiograms, electroencephalograms, or other appropriate measurable indices.

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ETUDES PSYCHIATRIQUES. Vol. II, ASPECTS SÉMIOL-
OGIQUES. By Henri Ey, M. D. (Paris: Desclée
de Brouwer, 1950.)

Henri Ey studies in great details the different symptoms of the neuroses and psychoses. He summarizes the experimental, clinical, and pathological work that has been done in the course of the last 50 years in France, Germany, and in the English and Spanish-speaking countries. Ey's approach is that the different troubles of behavior or thinking

that constitute the clinical pictures of the mental diseases are neither constant nor simple. They represent a lack of maturity or a dissolution of a mental function. They vary in significance and nature according to the level of the impairment. The object of psychiatric semeiology is not to describe isolated symptoms but their evolution in a clinical unit.

The main chapters are devoted to the memory disturbances, catatonia, the impulsions, the perversions, anxiety, and so on. The author's eclectic views run through the whole book. This rich volume gives a true picture of the present problems in psychiatry.

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THE TRANSMISSION OF NERVE IMPULSES AT NEURO-
EFFECTOR JUNCTIONS AND PERIPHERAL SYN-
APSES. By Arturo Rosenblueth. (Technology
Press, Mass. Inst. Tech. & John Wiley & Sons,
1950. Price: \$6.00.)

In this monograph Professor Rosenblueth gives a full discussion of transmission in autonomic ganglia; at postganglionic nerve endings in effectors; and at motor nerve endings and end-plates in striated muscles. The term transmission is used by the author in referring to the processes in these junctions. The term conduction is used to refer to the processes particularly in nerve fibers. The term synapse is extended to include the junctions of motor nerve fibers with striated muscle. The author's terminology will be largely adhered to in this review.

Junctional transmission at the sites mentioned is currently explained on the electrical or the chemical theory. For illustration an autonomic ganglion will be considered. On the electrical theory it is believed that the spike potentials of the presynaptic endings are adequate to excite the postsynaptic ganglionic neurones and the resulting impulses are then propagated to the periphery. On the chemical theory the presynaptic impulses liberate a chemical mediator, acetylcholine, which itself stimulates the neurones to emit impulses; the acetylcholine must then be hydrolysed by cholinesterase within the refractory period of the neurones. Similar interpretations for both theories apply to transmission by motor nerve endings and end-plates to striated muscles.

Insofar as the peripheral endings of sympathetic and parasympathetic endings are concerned the chemical theory is rather firmly established: thus it is generally held that chemical agents are liberated at these endings and themselves induce the characteristic effects of the nerves. T. R. Elliott, 1904-5, showed that the action of sympathetic nerves depends on the liberation, at their peripheral endings, of adrenaline, which itself induces the specific responses in the effectors, for instance smooth muscle. On the other hand parasympathetic nerves liberate, at their peripheral endings, acetylcholine, for example the vagus on the frog's heart (Loewi, 1921); this agent then elicits the effects character-

istic of the nerves. Later experimental evidence supports the conception that acetylcholine is liberated at the presynaptic endings in autonomic ganglia (Kibjakow, 1933) and itself excites the postsynaptic ganglionic neurones to emit impulses (Bronk, Tower, and D. Y. Solandt, 1935). Other evidence leads to the view that acetylcholine is liberated by motor nerve endings in striated muscle and itself excites the muscle fibers (Dale and Feldberg, 1934; G. L. Brown, 1937).

As stated above, chemical transmission by adrenaline or acetylcholine at peripheral endings of autonomic fibers is generally accepted. However, transmission in autonomic ganglia and at the endings of motor nerves in striated muscle is still considered to be electrical by many neurophysiologists: thus they regard the spike potentials in the nerve endings as adequate stimuli for the ganglionic neurones or muscles respectively. Rosenblueth analyses the evidence, much of which is derived from the researches by himself and his collaborators, and, as a result, he favors the chemical theory. Transmission by acetylcholine was designated *cholinergic* and that by adrenaline *adrenergic* by H. H. Dale, 1933, when referring to the various junctions cited. Adrenaline, liberated by sympathetic endings, is believed to be altered into sympathin E, which evokes excitation of the effectors, and sympathin I, which evokes inhibition (Cannon and Rosenblueth, 1933).

Since some mammalian smooth muscles are not excitable electrically the author argues that the spike potentials of the nerve terminals would not be adequate stimuli for these tissues; hence transmission would be solely by adrenaline or acetylcholine. In transmission to striated muscles, from physical considerations, only a fraction of the spike potential of a nerve terminal would be available for stimulation of the muscle fiber and this small and all-too-brief potential would probably be below the threshold of the muscle fiber. For this and other reasons the author believes that the electrical theory is inadequate for striated muscles. Similar reasoning causes him to discard the electrical theory for transmission in autonomic ganglia. Thus he is led to the belief that transmission in autonomic ganglia and neuromuscular junctions conforms to the chemical theory and is, in general, as follows: presynaptic nerve impulse; liberation of acetylcholine; excita-

tion by acetylcholine of muscle fiber or ganglion cell; end-plate potential (in muscle) or synaptic potential (in ganglion); postsynaptic impulses conducted by nerve or muscle fibers, in the latter causing contraction. Finally there is hydrolysis of the acetylcholine within the refractory period of the neurone or muscle fiber. The author believes further that potassium ions may be adjuvants of transmission in ganglionic and neuromuscular junctions; this applies particularly to the phenomenon of facilitation in both situations.

The author believes that some data on transmission cannot be explained on either the chemical or the electrical theory, but on the available evidence, he favors the chemical theory. Certain of the author's conclusions may not be accepted unreservedly by neurophysiologists; however, the book offers a closely reasoned account of this difficult subject and hence merits a most thoughtful perusal.

FREDERICK R. MILLER, M.D.,
Department of Physiology,
University of Toronto.

TASCHENBUCH DER PRAKTISCHEN MEDIZIN. Edited by J. Kottmaier. (Stuttgart: Georg Thieme Verlag, 1949. Price: DM 24.)

This convenient pocket book (790 pages, $\frac{1}{4}$ inch thick) is an excellent and remarkably complete epitome of medical practice including the special branches.

Section headings arranged alphabetically (in German) are as follows: ophthalmology, surgery, gynecology and obstetrics, otolaryngology, dermatology and venereology, internal medicine, pediatrics, neurology and psychiatry, dentistry and stomatology, dietetics, vitamins and hormones, diagnostic technique, therapeutic technique, pharmacology. Each section is prepared by an authority in his field, in most cases professors in German clinics.

In each section the pathological conditions are arranged alphabetically with emphasis especially on diagnosis and treatment. While the material is necessarily very condensed it does outline the essentials and should prove of great value to those for whom it is intended, namely, the German or German-speaking physicians.

C. B. F.

IN MEMORIAM

WILLIAM LOGIE RUSSELL, M.D.

1863-1951

The sixtieth president of the American Psychiatric Association died in California March 31, 1951, in the 88th year of his life.

William L. Russell was born in the Province of New Brunswick, Canada, July 24, 1863. His early schooling was at Chatham Head and he was a student at the University of New Brunswick, which college was to confer on him this spring an honorary degree of LL.D. He came to the United States, attended the University Medical College of New York City, from which he was graduated in 1885 with the degree of Doctor of Medicine. He interned at the Jersey City Hospital, practiced in that state, and entered the New York state hospital service at the Willard State Hospital in 1897, where he eventually became first assistant physician. He was the first medical inspector. Soon he was made superintendent of the Brooklyn State Hospital. A year later he was appointed medical director of Bloomingdale Hospital, where he served 15 years, retiring in 1937. Retirement was not a complete withdrawal by Dr. Russell, for he continued to carry on his major psychiatric interests. He served as President of the Association during 1931 and 1932 and presided at the 88th meeting in Philadelphia.

The foregoing bleak recital of biographical facts conveys nothing of Dr. Russell's great accomplishments in the field of mental hygiene. To the younger members of this association Dr. Russell was a man unknown. To the younger half of the middle-aged group he was known by name only. To the other half of that middle-aged group he is well remembered though many of his contemporaries have passed on. Dr. Russell was among the last of the old stalwarts, and those who have been spared will remember him as an outstanding person. His ascetic bearing, his quiet dignity, his erect slender figure, the zeal that shone in his eyes, the pale wan smile of his countenance, made him

one never to be forgotten by those who fell under his spell. Dr. Russell deeply felt that life was a serious journey that presented the opportunity to pursue worth-while objectives, not for himself, but for advancing the welfare of people with sick minds.

In Dr. Russell's early days in New York State a person could be admitted to a New York state mental hospital only after certain legal ends had been satisfied. There had to be a petition by a relative or, if none was available or willing, by a Poor Officer. Two physicians made a joint examination, notice to the patient had to be served, and the papers sent to a judge for the order declaring the person "to be insane" and to be committed to a mental hospital. There might be a delay of a week or 10 days. If the patient had no helpful relatives, it occasionally happened that there was an interval in a lock-up. In these circumstances Dr. Russell saw a situation demanding relief. His first move was to make it possible for the patient to be admitted without the order of the judge and kept in the hospital for 10 days, during which interval the signature of the judge could be obtained. Then came voluntary admissions with no one between the patient and the hospital, and still later, admission by a petition by a relative and a certificate by the family physician with no court order. Thus the gaps were gradually filled, and all by Dr. Russell's gentle pressure. One remained, and that was what to do with a stranger who was behaving in an irrational manner. That situation was not a matter for the police or for the Poor Officer, even though he was called the Commissioner of Charities. A sick person was involved and that made necessary the intervention by a physician. Local health officers had come into being and it became the legal responsibility of the health officer to see that the sick person had hospital care. Admission could be had on the one-page health officer's admission form, the comple-

tion of which took but a few minutes. A telephone message to the hospital resulted in nurses being dispatched by automobile and the whole enterprise finished forthwith. The spur for all of the foregoing came from Dr. Russell, but others helped.

He whose accomplishments we are today noting had another objective, and that was to resist lay intervention in the affairs of sick people. He strongly advocated medical care by experienced, trained psychiatrists. He was against lay direction of hospitals and administration by physicians who obtained preference because of political activity. His view was that mentally sick people should be in the hands of physicians experienced in mental medicine.

Dr. Russell wrote easily and lucidly. An unsigned article in our JOURNAL, if from his pen, could be identified as his. He lectured to students and addressed lay groups, but one can be sure that he was not happy when on the platform, for he was a modest and retiring man. A really monumental work of his is the well-known account of psychiatric beginnings in New York City. The book is entitled "The New York Hospital—A History of the Psychiatric Service 1771-1936," written and published in the years of his failing health.

Of course, Dr. Russell had other interests. He advocated nurse training schools, occupational therapy, diversion, clinics, social service, and to the extension of these activities he devoted himself wholeheartedly. He gave attention to the plans for the Payne-Whitney Psychiatric Clinic and watched its growth with the greatest interest. For years he was on the Board of the National Committee for Mental Hygiene and with a saddened heart he watched it pass into what he considered nonmedical hands. To this he was never reconciled.

Dr. Russell was not to be sought out for lighter moments. Gaiety was not his forte. For him life was a serious business. Duty and responsibility called with a demanding voice. He heard and responded.

What part did Dr. Russell play in the tapestry of life composed, as it is, of lights and shadows? It can be beautiful. It can depict gay and joyous scenes. It can give pleasure. But, strong enduring threads are required as a base upon which the flowers appear to grow. To the uncritical, Dr. Russell appeared to have no part in the beautiful colors. But, there he was, the sturdy foundation upon which the care-free dance.

FREDERICK W. PARSONS, M. D.

SAMUEL RAMIREZ MORENO, M. D.

1898-1951

It is with great sorrow that we record the death of Dr. Samuel Ramirez Moreno who since 1942 has been a Corresponding Member of this Association. He passed away very peacefully after a heart attack on April 12, 1951. Dr. Ramirez Moreno was a comparatively young man; he was born in Mexico City in 1898. To some who have met him on his many visits to the United States or who talked with him as recently as the summer of last year when he attended the International Congress on Psychiatry in Paris, he may have seemed to be rather older than this for he had a good deal of sickness to contend with, although it was never allowed by him to interfere with his work in Mexico City or with his wide international contacts. Dr. Ramirez Moreno was educated

in Mexico City and graduated in medicine in 1924. Even as a student he had demonstrated his wide scientific interests and his organizing ability. I have been told that as a student he was the founder of the Ornithological League of Mexico, and his literary gift came to the fore then for he published a number of articles on topics of this type that were of considerable interest in the fields of agriculture and industry.

While a medical student he succeeded in persuading the authorities to establish special ward services for neurosyphilis at the mental hospital of Mexico City. Soon after his graduation in medicine he was one of the founders of the Mexico Psychiatric Society, and 4 years later he was made Professor of Neuropsychiatry in Mexico. For 3 years

from 1929 to 1932 he was director of the General Mental Hospital of Mexico, but he is perhaps better known as the founder and chief physician of a private clinic bearing his own name. It was the first private sanitarium in Mexico built and conducted on North American standards.

Those who have visited him in his private hospital have been impressed with the culture and all the provisions for the comfort of his patients. His own office in his hospital was full of evidence of the breadth of his scientific interests as well as of his international travel. The diplomas of many psychiatric societies in different parts of the country hung upon his wall. His portrait gallery of colleagues from other countries was almost unique and interspersed with these were all kinds of curios collected from the historical and anthropological researches of Mexico and other nearby countries of Central America.

Dr. Ramirez Moreno was not only a great traveler by virtue of his holding an official position in the psychiatric assistance authority of his country, but he was a welcome visitor to psychiatric meetings and congresses in many countries and had membership in a great many different societies. He attended the First International Congress on Mental Hygiene in Washington in 1930, and as recently as 1948 it was he who brought to the London Congress on Mental Health the invitation of the Mexican Government to hold the next Congress in Mexico City. That he should have died when psychiatry in his own country is making so many advances and so shortly before the Fourth International Congress on Mental Health to be held there is tragic.

The deep sympathy of all who knew him well go to his widow and his family.

GEORGE S. STEVENSON, M. D.



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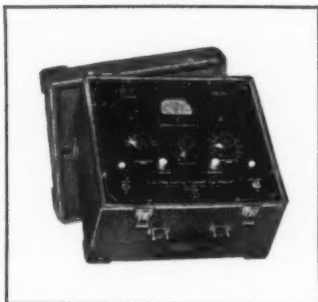
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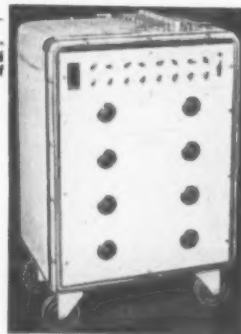
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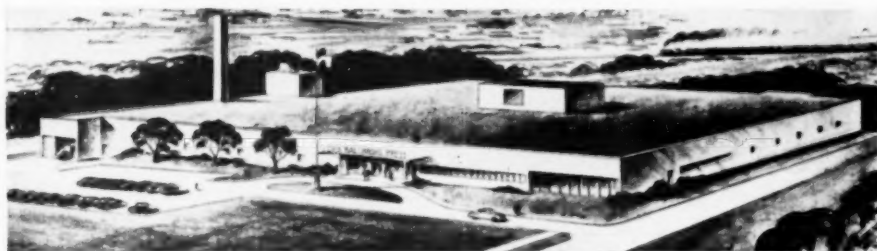
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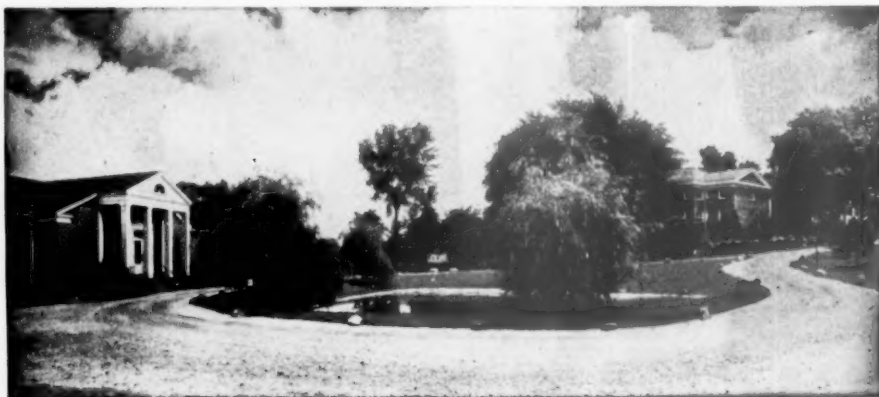
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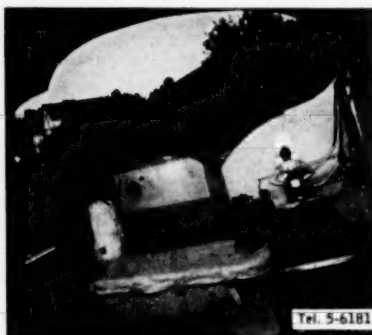
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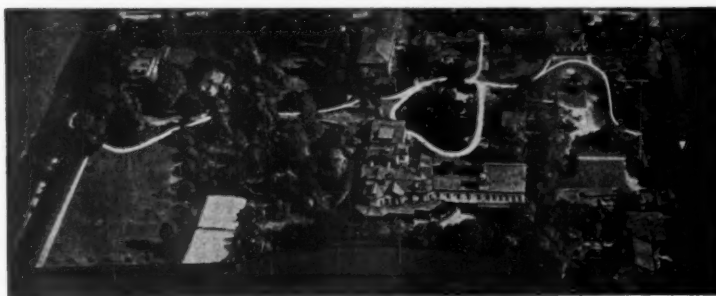
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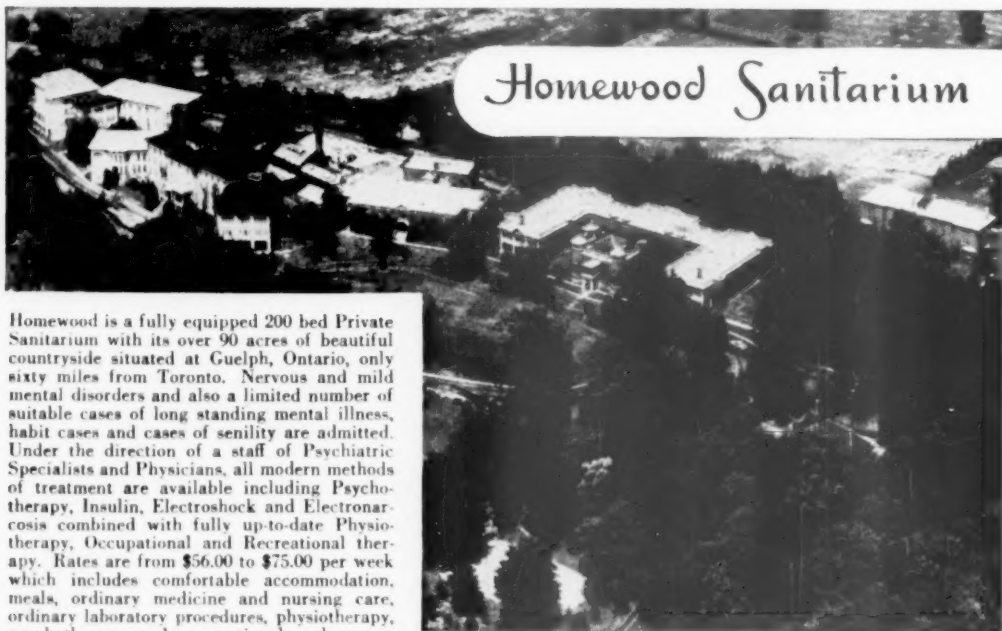
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